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ABSTRACT

"Utilization of Skills in the Care of the Patient with Common, Well-Defined Health Deviations I" (NS 217) is an associate degree nursing course offered at Chattanooga State Technical Community College to help students develop new competencies necessary for the care of patients with deviations of the cardiovascular, endocrine, integumentary, and gastrointestinal subsystems; and to introduce basic concepts and principles related to acid-base balance. The course syllabus for NS 217 begins with information on class, laboratory, and credit hours; prerequisites; textbooks; week-by-week course content; course competencies; evaluation criteria; and curriculum coding. The bulk of the syllabus presents competencies, information sheets, assignments, and questions keyed to the textbook for each of the six course units. The units focus on: (1) acid-base balance; (2) burns; (3) the gastrointestinal subsystem; (4) the liver and associated structures; (5) the endocrine subsystem; and (6) the cardiovascular subsystem. In addition, a patient assessment guide and a clinical behaviors evaluation form are attached. (EJV)

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UTILIZATION OF SKILLS IN THE CARE OF THE PATIENT WITH COMMON, WELL-DEFINED HEALTH DEVIATIONS I (NS 217): COMPETENCY-BASED COURSE SYLLABUS

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COURSE SYLLABUS
UTILIZATION OF SKILLS IN THE CARE OF THE PATIENT WITH COMMON, WELL-DEFINED HEALTH DEVIATIONS I

NS 217

CLASS HOURS: 4
LABORATORY HOURS: 9

CREDIT HOURS: 7

CATALOG COURSE DESCRIPTION:

This course is designed to develop new competencies necessary for the care of patients with common, well-defined health deviations of the cardiovascular, endocrine, integumentary, and gastrointestinal subsystems including the liver and related structures. Included in the course are basic concepts and principles related to acid-base balance. The student will implement the five roles of the Associate Degree nurse and the decision-making process in the care of individual patients in the secondary care setting. Two comprehensive care plans will include emphasis on the teaching-learning process and meeting the learning needs of patients with health deviations in subsystems studied within this course.

ENTRY LEVEL STANDARDS:

PRE-REQUISITE AND/OR CO-REQUISITE:
Pre-requisite(s): BI 174, 184, and 194 or equivalent
BI 204 or equivalent
NS 111, 121, 127, 139, and 207

TEXTBOOK(S) AND OTHER REFERENCE MATERIAL BASIC TO THIS COURSE

1. Carpenito, Lynda Juall, HANDBOOK OF NURSING DIAGNOSIS. Philadelphia: J. B. Lippincott Co., 1984.
2. Kozier, B., and Erb, G. FUNDAMENTALS OF NURSING: CONCEPTS AND PROCEDURES. Reading: Addison-Wesley, 1983.
3. Phipps, W., Long, B., and Woods, N. MEDICAL SURGICAL NURSING: CONCEPTS AND CLINICAL PRACTICE. St. Louis: C. V. Mosby Co., 1983.
4. Smith, S. and Duell, D. NURSING SKILLS AND EVALUATION; A NURSING PROCESS APPROACH. St. Louis: C. V. Mosby Co., 1982.

NS 217

WEEK/UNIT/TOPIC BASIS:

A systematic and orderly list of activities and/or events that will comprise the total alloted time for the course. The activities, whether based on weeks, units or topics, should correspond to the number of weeks in the quarter.

I. COURSE CONTENT

Week/Date	Unit	Topic
1 9-17	I	Care of the Patient with Deviations of Acid-Base Balance
9-19	I	Acid-Base Balance - continued
	II	Care of the Patient with Deviations of the Integumentary resulting from Burns
2 9-24	II	Burns - continued
9-26	III	Care of the Patient with Deviations of the Gastrointestinal Subsystem
3 10-1	III	G.I. - continued
10-3	III	G.I. - continued
4 10-8	TEST: UNITS I, II, III	
	IV	Care of the Patient with Deviations of the Liver and Associated Structures
10-10	IV	Liver - continued
5 10-15	V	Care of the Patient with Deviations of the Endocrine Subsystem
10-17	V	Endocrine - continued
6 10-22	V	Endocrine - continued
10-24	V	Endocrine - continued
7 10-29	V	Endocrine - continued
10-31	VI	Care of the Patient with Deviations of the Cardiovascular Subsystem
8 11-05	TEST: UNITS IV, V	
	VI	Cardiovascular - continued
11-07	VI	Cardiovascular - continued
9 11-12	VI	Cardiovascular - continued
11-14	VI	Cardiovascular - continued
10 11-19	TEST: UNIT VI (Through C-V material covered to this point)	
	VI	Cardiovascular - continued
11 11-26	VI	Cardiovascular - continued

II. CENTRAL COMPETENCIES:
Upon completion of this course, the student will be able to:

3 36) IMPLEMENT the teaching-learning process in providing care for patients with health deviations of the integumentary, endocrine, cardiovascular, and gastrointestinal subsystems including the liver and related structures.

1-4 37) APPLY the five phases of the decision-making process to the care of patients with actual or potential acid-base imbalances resulting from burn injuries, endocrine, cardiovascular, or gastrointestinal subsystem deviations.

4 38) DESIGN nursing strategies to maintain, promote, and restore optimal function and adaptation in patients with health deviations of the integumentary subsystem resulting from burns.

4 39) DEVELOP a nursing care plan for the patient with common, well-defined health deviations of the endocrine, cardiovascular, or gastrointestinal subsystems including the liver and related structures with a focus on evaluation.

1-5 40) DEMONSTRATE expansion of the five roles of the Associate Degree Nurse utilizing the decision-making process in providing care to individual patients with common, well-defined health deviations of the endocrne, cardiovascular, and gastrointestinal subsystems including the liver and related structures.

III. SPECIFIC EVALUATION PROCESS WHEREBY THE ACHIEVEMENT WILL BE MEASURED:

A. Testing Procedures:

Examinations and Quizzes:

1. Quizzes on assigned readings, medication problems, etc. (short answer, matching, true/false).
2. Three (3) unit examinations (objective, short answer, discussion).
3. One (1) comprehensive final examination (objective, short answer).

An academic average of 70% on the unit examinations and final examination COMBINED is required for progression to NS 227.

B. Laboratory:

1. A student must receive a "safe" evaluation in the clinical setting for progression. An "unsafe" evaluation will result in the student being unable to progress regardless of the acacemic average.

C. Field Work:

1. Completion of two (2) care plans in which the teaching-learning process is applied to the patient with a health deviation of the integumentary, endocrine, cardiovascular, or gastrointestinal subsystem.

2. Completion of an assessment guide and medication cards on each assigned patient in the clinical area.*

* Assessment guides and medication cards will be graded on a Satisfactory/Unsatisfactory basis.

D. Other evaluation methods (off-campus processes, standardized testing, etc.):

Average of Unit Examinations (3)	50%*
Final Examination	25%*
Quizzes	10%
Care Plans (2)	15%

* The student must have an average of 70% or above on the unit examinations and final examination COMBINED to progress to NS 227.

E. Grading Scale:

90% - 100% = A
80% - 89% = B
70% - 79% = C
65% - 69% = D
below 65% = F

LEGEND FOR CURRICULUM CODING

I. Content threads are coded superiorly while Process threads are coded inferiorly.

Content Threads	Process Threads
Adaptation	Teaching-Learning
Safety	Communication
Growth and Development	Nursing
Nutrition	Management
Pharmacology	
Subsystems	
Pathophysiology	

II. Course Competencies are referenced back to program goals as evidenced by numbers in the left margin.

Unit and Weekly Objectives are referenced back to Cumulative Course Competencies as evidenced by numbers in the left margin.

NS 217

Unit I

Care of the Patient with Deviations of Acid-Base Balance

1, 37	■●	1. Define the following terms: pH H_2CO_3 (carbonic acid) acidosis (acidemia) respiratory acidosis (carbonic acid excess) metabolic acidosis (base barcarbonate deficit) Kussmaul breathing alkalosis (alkalemia) respiratory alkalosis (carbonic acid deficit) metabolic alkalosis (bicarbonate excess) compensation
37	□	2. Identify the three major buffer systems of the body.
37	□	3. Describe how the bicarbonate buffer system functions to maintain acid-base balance.
37	□★	4. Identify the role of the kidneys and lungs in regulating acid-base balance.
3,37	□★	5. Describe blood-gas determinations used to determine acid-base balance.
3,37	★○	6. State the normal arterial blood values for the following: pH $PaCO_2$ PaO_2 O_2 saturation Base Excess HCO_3
37	□★	7. Identify four acid-base disturbances.

Unit I

Care of the Patient with Deviations of Acid-Base Balance - Continued

3,37 □★● 8. Describe the causes, clinical signs, ~~and~~ laboratory findings related to each of the following:

a. Respiratory acidosis
b. Metabolic acidosis
c. Respiratory alkalosis
d. Metabolic alkalosis

37 □★ 9. Describe the concept of compensation.

3,10,37 □★● 10. Given sample ABG reports, identify various states of acid-base balance, their causes, and whether or not compensation has occurred.

Read: Kozier and Erb - pp. 787-788; 791-792; 804-809.
Phipps, Long and Woods - pp. 352-357.

View: VT 832 The Body's Regulation of pH
VT 742 Compensation of Imbalances
VT 743 Metabolic Acidosis and Alkalosis
VT 833 Respiratory Acidosis and Alkalosis

Enrichment: Glass, L., and Jenkins C. The ups and downs of serum pH. Nursing 83, September, 34-41. (On reserve.)

NS 217

Unit II, Section A

Care of the Patient with Deviations of the Integument Resulting from Burns

1,37, 38		1. Define the following terms: first degree burn second degree burn third degree burn hypovolemic stage hemoconcentration diuretic stage hemodilution rehabilitative state "rule of nines" open method (of burn treatment) closed method (of burn treatment) hydrotherapy split-thickness graft
38		2. Describe how burns are classified.
38		3. Identify pathophysiologic alterations which occur with severe burns.
37,38		4. Describe the physiologic changes which occur in the three stages following severe burns: a) hypovolemic stage b) diuretic stage c) rehabilitative stage
38		5. Describe the initial care of major burns prior to hospitalization.
3, 38		6. Explain the initial assessment of the patient on arrival to the hospital.
38		7. Describe immediate in-patient interventions used in the treatment of burns.

NS 217

Unit II, Section B

Care of the Patient with Deviations of the Integument Resulting from Burns - Continued

37,38	1.	Explain the promotion, maintenance, and restoration of fluid and electrolyte balance in severe burns.
38	2.	Describe measures utilized to prevent infection in the burned patient.
38	3.	Summarize the following methods of treatment of burned areas: a. open method b. closed method c. hydrotherapy d. topical applications
39	4.	Describe the use of dressings and skin grafts used to cover burn wounds.
39	5.	Summarize nursing strategies utilized to meet the burn patient's nutritional needs including those which relate to: a. protein and calories b. vitamins and minerals c. weight monitoring d. parenteral replacement of fluids and nutrients e. measures for promotion of weight gain and normal bowel elimination
5,39	6.	Identify nursing strategies for promotion, restoration, and maintenance of mobility in the burn patient.
31,39	7.	Describe the effects of the burn injury on the patient's psychological subsystem and identify nursing strategies to promote psychological adaptation.
16, 39	8.	Write a discharge plan for the burn patient related to nutritional needs, mobility, skin care, use of related pressure garments.
	9.	Identify outcome criteria for the person with burns.

Read: Phipps, Long, and Woods, pp. 1779-1781, 1810-1852.
Surveyer, J., and Clougherty, D., Burn scars: Fighting the effects. AJN, 1983, May, 746-751. (On reserve.)

View: VT 815 Emergency Care of the Burn Wound
VT 813 Assessing the Severity of the Burn Injury
VT 814 Fluid Resuscitation for the Burn Patient

Enrichment: Johnson, C. L. and Cain, V. J. The rehab guide. AJN, 1985, Jan. 48-50.
Robertson, K. E., Cross P. J. and Terry, J.C. The crucial first days. AJN, 1985, Jan., 30-45
Rosequist, C. C. and Shepp, P. H. The nutrition factor. AJN, 1985, 45-47.

NS 217

Unit III, Section A

Care of the Patient with Deviations of the Gastrointestinal Subsystem

Terminology

1, 39,40

1. Define the following terms:

   esophagectomy
   esophagoplasty
   esophagogastrostomy
   esophagojejunostomy
   gastrectomy
   gastroduodenostomy
   gastrojejunostomy
   antrectomy
   pyloroplasty
   gastric partitioning

Assessment of Upper Gastrointestinal Tract Function

39,40

2. Describe the anatomy and physiology of the upper gastrointestinal (UGI) tract. (Review)

3, ,40

3. List subjective and objective data to be gathered relative to assessment of the UGI tract.

3, 39,40

4. Describe the following diagnostic tests related to the UGI tract including pertinent strategies relative to preparation of the patient:

   a. dental and facial bone X Rays
   b. barium swallow (UGI)
   c. angiography
   d. endoscopy
   e. cytology
   f. biopsy
   g. gastric analysis

Care of the Patient with Deviations of the Gastrointestinal Subsystem

Intervention for the Person with Digestive Tract Deviations

39,40 5. List interventions related to dental care and hygiene.

39,40 6. Describe the (a) pathophysiology, (b) clinical picture, and, (c) nursing intervention related to:

a. nausea and vomiting
b. heartburn

5,39,40 7. Describe the purpose of and appropriate nursing strategies related to:

a. nasogastric intubation (review)
b. nasogastric suction

39,40 8. Define common nursing strategies related to the patient with a(n):

a. gastrostomy
b. esophagostomy

39,40 9. Describe the pre and post-operative nursing care of patients undergoing surgery of the UGI tract.

Read: Phipps, Long, and Woods, pp. 1376-1403
Smith and Duell, pp. 305-308 and 313

Hahn, Barkin and Oestreich, pp. 506-508.

View: VT 851 Gastric and Gastrointestinal Decompression
VT 861 Gastrointestinal Nursing
VT 1162 Therapeutic Techniques for GI Problems

Enrichment: Metheny, N. M. 20 ways to prevent tube feeding complications. Nursing 85, 1985, Jan., 47-50.
Brozenec, J. Caring for the postoperative patient with an abdominal drain. Nursing 85, 1985, 55-57.
Konstantinides, N. N. and Shronts, E. Tube feeding: managing the basics, AJN 83, (Sept), 1311-1324.

NS 217

Unit III, Section B

Care of the Patient with Deviations of the Gastrointestinal Subsystem, Continued

Deviations of the Upper Gastrointestinal Tract

1, 39,40

1. Define the following terms:

   hemiglossectomy
   glossectomy
   stomatitis
   gingivitis
   hiatal hernia
   gastritis
   gastric ulcer
   duodenal ulcer
   stress ulcer
   vagotomy
   pyloroplasty
   malena

3, 39,40

2. Describe briefly the (a) etiology, (b) pathophysiology, (c) signs and symptoms, and (d) interventions related to the following deviations:

   a. infections of the mouth and diseases of the teeth and gums
   b. tumors of the mouth
   c. fracture of the jaw
   d. diaprahmatic hernia (hiatal hernia)
   e. gastritis
   f. cancer of the stomach
   g. pyloric stenosis

39,40

3. Differentiate gastric ulcers from peptic ulcers.

3, 39,40

4. Describe the (a) etiology, (b) pathophysiology, and (c) signs and symptoms of peptic ulcers.

16, 39,40

5. Describe the following interventions related to the treatment of peptic ulcers including related nursing strategies:

   a. antacids
   b. histamine antagonist
   c. anticholinergic drugs
   d. diet
   e. rest
   f. surgery
   g. health teaching

NS 217

Unit III, Section B

Care of the Patient with Deviations of the Gastrointestinal Tract - Continued

39,40 6. Describe the following potential complications related to peptic ulcer including nursing assessment and interventions:

a) perforation
b) pyloric obstruction
c) hemorrhage
d) post-op dumping syndrome

39,40 7. List outcome criteria for the patient with a peptic ulcer and develop an appropriate teaching plan to accomplish these.

Read: Phipps, Long, and Woods; pp. 1404-1426
Curtailing a life-threatening crisis: GI bleeding, Nursing 81, April, 71-73. (On reserve.)

Hahn, Barkin and Oestreich, pp. 497-503; 491-492.

View: VT 1120 Care of Patients with Gastrodudodenal Ulcer Surgery

CHATTANOOGA STATE TECHNICAL COMMUNITY COLLEGE
Chattanooga, Tennessee
Nursing Division

STUDY OUTLINE FOR ANATOMY AND PHYSIOLOGY OF THE UPPER GI TRACT

NS 217

I. Definition of GI Subsystem
   A. Collection of heterogenous organs specialized to handle ingested foods.
   B. Major components of GI subsystem
      1. Upper digestive tract includes mouth, esophagus, stomach, and duodenum.
      2. Lower digestive tract includes jejunum, ileum, and large intestine.
      3. Other components of GI subsystem which lie outside tract but connected to it by ducts are salivary glands, pancreas, and biliary system (liver, gallbladder, and bile ducts).

II. Activities of Digestive Tract
   A. Motility
   B. Secretions
      1. Two types
         a. mucous—protects and lubricates
         b. digestive secretions—enzymes, electrolytes, and hormones.
   C. Digestion
      1. Breaking down of food by digestive secretions into compounds which are small enough in size and in the right chemical form for absorption.
         a. polysaccharides——>monosaccharides
         b. proteins——>amino acids
         c. triglycerides——>free fatty acids and monoglycerides
   D. Absorption
      1. Transfer of water and solutes from the lumen of GI tract into blood and lymph
      2. Main site is small intestine
      3. Occurs by diffusion and active transport

III. Circulation of GI Tract
   A. Called splanchnic circulation
   B. Begins: Heart——>abd. aorta——>
      1. celiac artery——>a. splenic artery (stomach
                                spleen
                                pancreas)
                          b. gastric artery (stomach)
                          c. hapatic (liver)
      2. superior mesenteric——>(small intestine)
      3. inferior mesenteric——>(large intestine)
   C. Above flow (except hapatic artery) into portal vein——>liver——>hapatic vein——>inferior vena cava——> heart

IV. Neural Control of GI Subsystem
  A. Internal nerve plexus
    1. Interconnecting network of neurons in the wall of digestive tract
      a. Known as myenteric plexus (Auerbach's) and submucosa plexus (Meissner's)
      b. Contains sensory neurons, interneurons, and motor neurons
      c. Allows for short reflex regulation of tract
      d. Responds to chemical stimuli or change in wall distention
  B. External nerve plexus
    1. Supplied by autonomic nervous system
    2. Both sympathetic and parasympathetic efferent fibers synapse with cell bodies of internal nerve plexus
      a. Parasympathetic system causes an increase in tone of muscle, decrease tone of sphincters, and increase in frequency, volume, and velocity of contraction—mediated through the vagus nerve.
      b. Sympathetic system constricts sphincters, ↓ molity and tone, and ↓ blood flow—mediated through greater splanchnic nerves

V. The Mouth, Pharynx, and Esophagus
  A. Mouth
    1. Chewing is first act of digestion
      a. partly voluntary and partly reflexive
      b. mediated through no. of cranial nerves (esp. V)
      c. carried out by skeletal muscles
      d. saliva acts to lubricate and soften food mass
        i. contains ptyalin (enzyme) which acts to hydrolyze starches
        ii. contains HCO_3^- which neutralizes acid formed by bacteria
        iii. 3 pairs of salivary glands—sublingual, submaxillary, and parotid
    2. Swallowing
  B. Esophagus
    1. Collapsible muscular tube that connects pharynx to stomach
    2. Peristalic waves move bolus
  C. Stomach
    1. Function
      a. storage, mixing, and liquefaction of bolus of food to chyme
    2. Anatomic divisions
      a. fundus, body, and pylorus
      b. sphincters—cardiac and pyloric

3. Regulation of gastric secretions
   a. parasympathetic impulses from medulla via vagus nerve stimulate gastric glands to secrete pepsinogen, HCl acid, mucous, and stomach gastrin
   b. occurs in 3 phases
      i. Cephalic--results from sight, small, and taste of food. Originates in hypothalmus or cerebral cortex. Mediated by vagus nerve.
      ii. Gastric--stimulated by food in pylorus. Regulated by food and by gastrin (hormone) secreted by pyloric mucosa. Gastrin absorbed by blood stream and carried back to gastric glands which it stimulates to secrete digestive juices.
      iii. Intestinal--occurs when food enters duodenum and causes release of enetric gastrin which stimulates gastric glands
   c. Inhibition of gastric secretions
      i. Enterogastric reflex--distention of duodenum initiates. Inhibits parasympathetic and stimulates sympathetic system.
      ii. Intestinal hormone--enterogastrone inhibits secretion of gastric juice and decrease gastric motility
4. Gastric Digestion
   a. Zymogenic (chief) cells secrete pepsinogen
   b. Parietal cells secrete Hcl which converts pepsinogen to pepsin (used to digest pro to peptides). Also secretes intrinsic factor (required for Vit. B-12 absorption)
   c. Mucous cells secrete mucus, which protects stomach wall
   d. Enteroendocrine (argentaffin) cells secrete stomach gastrin (↑ secretions, ↑ motility, and relaxes pyloric sphincter)
5. Gastric Absorption
   a. Mostly impermeable to substances. Absorbs alcohol and some H2O and drugs.

CHATTANOOGA STATE TECHNICAL COMMUNITY COLLEGE
Chattanooga, Tennessee
Nursing Department

NS 217

G. I. BLEED

I. Assessment

A. Subjective

1. General History
2. Key Questions

   a. Have you recently felt nauseated or fatigued?
   b. Have you lost weight?
   c. Any abd. tenderness?
   d. Did you vomit?
   e. If so, how many times?
   f. Can you describe the vomitus?
   g. When was last bowel movement?
   h. What color were the stools?
   i. Normally, how frequently do you have bowel movements?
   j. Have you been taking any medications?
   k. If so, what kind? (Ask about aspirin specifically.)
   l. Have you been drinking alcohol recently?
   m. How much alcohol do you normally drink?
   n. Have you been diagnosed as having any gastrointestinal conditions such as hemorrhoids, ulcers, or ulcerative colitus?

3. May c/o dizziness, faintness, thirst, apprehensiveness, and restlessness.

B. Objective

1. Pale and diaphoretic
2. BP ↓
3. HR ↑ and thready
4. Resp > 20
5. UOP < 30 cc/1 hr
6. Disorientation
7. Bright red vomitus (hematemesis)
8. Dark brown emesis (digested old blood)
9. Black tarry stool (melena)
10. Abd. tenderness on palpation

II. Intervention

A. Start IV (large bore needle - 16 g). Give Ringers lactate, NS, or volume expander.
B. Decompression and iced saline lavages

1. Insert NG tube (18 Fr)
2. Aspirate clots
3. Instill ice saline (60-100 ml)
4. Leave dwell 2-3 mins.
5. Aspirate clots and iced saline
6. Continue till clear or light pink
7. Keep track of input and output
8. Ice saline acts by constricting blood vessels.

C. Prepare pt. for diagnostic test---endoscopy and/or angiography.
D. Monitor v.s. q 15 mins.
E. Monitor UOP Q 1° - notify if < 30 cc for two consecutive hours.
F. If extensive loss of blood, will insert CVP (central venous pressure) line---normal readings 5-10 mm H_2O pressure.
G. Measure and record loss of blood in emesis and stools.
H. Cardiac Monitor
I. O_2 per nasal cannula or face tent
J. Type and crossmatch blood. Usually standing order in G. I. bleed to give 2 units PRBC's if Hct < 30.
K. H. & H. q 4° - 6° (usually lag behind actual blood loss by 4° - 6°).
L. Antacid Gavages - to maintain gastric pH at 4.5 or higher (normal 1.1 to 2.4).

1. Aspirate gastric contents (NG tube must be in place).
2. Check gastric pH by litmus paper.
3. Give antacid down NG tube as ordered (ordered according to what pH reading is).
4. Clamp NG tube 30 min. or till next reading.

M. Pitressin may be given IV or through angiography site.

1. Pituitary hormone that produces vasoconstriction and antidiuresis
2. Controls G. I. bleed by contracting arterioles and capillaries of G. I. tract.
3. ↓ C. O. and ↓ diuresis---observe v. s. & u.o.p.
4. Given 0.1 to 0.5 units/min. (10-15 units in 200 ml. D_5)

N. Comfort Measures

1. Oral hygiene
2. Clean bed linens
3. Room deodorizers

O. Psychological support to ↓ stress

1. Calm behavior
2. Encourage expression of concerns
3. Provide emotional support

Reference:

Patras, A. Z., Paice, J., & Lanigan, K. Managing gastrointestinal bleed: it takes a two track mind. Nursing 84, 1984, 84 (7), 26-32.

McConnell, E. Curtailing a Life-threatening crisis: G.I. bleeding. Nursing 81, 81 (4). (on reserve)

NS 217

Unit III, Section C

Care of the Patient with Deviations of the Gastrointestinal Subsystem - Continued

Terminology

1, 39,40

1. Define the following terms:

   guaiac test
   barium enema
   sigmoidoscopy
   proctoscopy
   colonoscopy
   diarrhea
   flatus
   decompression (of intestinal tract)
   resection
   anastomosis
   stoma
   ileostomy
   colostomy
   cecostomy

Assessment of the Lower Gastrointestinal Tract

39,40

2. Describe the anatomy and physiology of the lower gastrointestinal tract. (Review)

3, 39.40

3. List objective and subjective data to be gathered relative to assessment of the lower GI tract.

3, 39,40

4. Describe the following diagnostic tests related to the lower GI tract including pertinent strategies related to preparation of the patient:

   a. stool examination
   b. barium enema
   c. endoscopy (sigmoidoscopy, proctoscopy, colonoscopy)
   d. biopsy

Interventions for the Person with Impaired Intestinal Elimination

39,40

5. List nursing strategies for promotion of normal bowel elimination. (Review)

NS 217

Unit III, Section C

Care of the Patient with Deviations of the Gastrointestinal Subsystem - Continued

Interventions for the Person with Impaired Intestinal Elimination - cont'd.

39,40 — 6. Describe the following common bowel deviations and identify nursing strategies to promote or restore an optimal steady state:

a. constipation
b. diarrhea
c. flatulence
d. fecal incontinence

39,40 — 7. Explain the purpose of intestinal decompression and describe the care of the patient with an intestinal tube.

39,40 — 8. Describe nursing strategies (both pre-op and post-op) related to care of the patient undergoing the following types of surgery:

a. resection and anastomosis of the bowel
b. abdominoperineal resection
c. intestinal bypass and gastric stapling

39,40 — 9. Compare and contrast the following types of ostomies in relation to their (a) location, (b) type of drainage, (c) bowel regulation, (d) fluid and electrolyte imbalance, and (e) skin irritation.

a. ileostomy
b. ascending colostomy
c. transverse colostomy
d. sigmoid colostomy

39,40 — 10. Describe nursing strategies related to the pre and post-op care of the patient with a colostomy and ileostomy.

3,5,36, 39,40 — 11. List outcome criteria for the person with an ileostomy or colostomy and develop a teaching plan to achieve these including the following aspects of care:

a. psychological adaptation
b. fluid and electrolyte balance
c. skin care and application of pouches
d. colostomy irrigation (Review)
e. diet
f. activity
g. sexuality
h. community resources

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Unit IV, Section C

Care of the Patient with Deviations of the Gastrointestinal Subsystem - Continued

Read: Phipps, Long, and Woods; pp. 1431-1476
Smith and Duell; pp. 454-458
Smith and Duell; pp. 442, 454 (Review)

Hahn, Barkin, and Oestreich, pp. 503 (Simethicone), + 509-527
Penninger, J. I., Moore, S. B. and Frager, S. R. After the ostomy: helping the patient reclaim his sexuality. RN, 1985, April. 46-50.

View: VT 766 Colostomy Irrigation
(Review)

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N3 217

STUDY OUTLINE FOR ANATOMY AND PHYSIOLOGY OF LOWER GI TRACT

I. Small Intestine

A. Anatomy

1. Extends from pyloric sphincter to the ileocecal valve.
2. Divisions

a. Dudodenum - joins pylorus of stomach - about 10 inches in length.
b. Jejunum - middle section about 8 feet.
c. Ileum - lower section about 12 feet.

B. Function

1. Digestion

a. Intestinal enzymes for CHO

i. maltase
ii. sucrase
iii. lactase

b. Intestinal enzymes for Pro

i. peptidases

c. Intestinal enzymes for nucleic acid

i. ribonuclease
ii. deoxyribonuclease

2. Absorption

a. CHO as monosaccharides
b. Protein as amino acids in duodenum and jejunum
c. Lipids as long-chain fatty acids and monoglycerides (C aid of bile salts) as part of micelles, resynthesized to triglycerides, and transported as chylomicrons
d. Water - 8.0-8.5 liters of fluid absorbed.
e. Fat soluble vitamins (A,D,E,K) along with fats in micelles in ileum
f. Vit. B_{12} + instrinsic factor absorbed.

II. Pancreas

A. Anatomy

1. Connected to the duodenum via the pancreatic and accessory ducts.

B. Function in Digestion

1. Secretion regulated by hormonal and neural control
2. Hormonal Control

a. HCL in chyme enters duodenum --> intestinal mucosa release secretin --> secretin in blood to pancreas --> pancreatic cells NaH_2CO_3
b. Products of pro digestion in intestine to release pancreozymin --> stimulates pancreatic cells to secrete enzymes.
c. Enzymes release

i. pancreatic amylase
ii. Trypsin and chymotrypsin
iii. pancreatic lipase

3. Neural control

a. reflex secretion from parasympathetic impulses via vagus nerve.

III. Gallbladder

A. Function in Digestion

1. Store and concentrates bile
2. Bile ejected into the common bile duct under influence of cholecystokinin
3. Bile aids with the emulsification of neutral fats

IV. Large Intestine

A. Anatomy

1. Cecum - first two inches of L. I.
2. Ascending Colon - extends vertically along right border of abd up to level of liver
3. Transverse colon - extends horizontally across abd
4. Descending colon - extendins vertically down left side of abdomen to level of iliac crest.
5. Sigmoid colon - S-shaped part of large Intestine curving downward below iliac crest to join rectum
6. Rectum - last 7 to 8 inches of intestine
7. Anus - terminal opening

IV. Large Intestine - continued

B. Digestion

1. Last stages through bacterial action

C. Absorption

1. Of 0.5 to 1.0 liter of water that enters all but 100 ml absorbed. (mainly ascending)
2. Absorb lytes and vitamins.

D. Defecation

1. reflex action aided by voluntary contractions of the diaphragm and abd. muscles
2. Voluntary control under cortical control

Unit III, Section D

Care of the Patient with Deviations of the Gastrointestinal Subsystem, Continued

Terminology

1,39, 40 □★ ●■

1. Define the following terms:

steatorrhea
lactose intolerance
appendicitis
peritonitis
diverticulum
Crohn's Disease
colitis
amebiasis
trichinosis
volvulus
intussusception
hemorrhoids
colectomy
hernia
herniorrhaphy

Deviations of the Lower Gastrointestinal Tract

3,39, 40 □★ ▭ ▱ ▲●■

2. Describe the (a) etiology, (b) pathophysiology, (c) signs and symptoms and (d) interventions (including pre and post-op care, and medications) related to the following deviations:

a. malabsorption syndrome
b. lactase deficiency
c. celiac disease
d. inflammatory disorders

1. appendicitis
2. peritonitis
3. Chron's disease
4. ulcerative colitis

e. diverticular disease
f. amebiases
g. trichinosis
h. intestinal obstruction
i. hemorrhoids
j. cancer of the bowel
k. hernia

Read: Phipps, Long, and Woods; pp. 1478-1500.

UNIT IV, SECTION A

Care of the Patient with Deviations of the Liver and Related Structures

1, 39, 40 1. Define the following terms:

cholecystography
cholangiography
angiography
ultrasound examination
endoscopy
hepatitis
toxic hepatitis
viral hepatitis
type A, infectious hepatitis
type B, serum hepatitis
cirrhosis
Laennec's cirrhosis
ascites
jaundice
portal hypertension
palmar erythema
spider angiomas

39 2. Describe the anatomy and physiology of the liver and biliary system and the non-endocrine functions of the pancreas. (Review Phipps, Long, and Woods, pp. 588-590.)

3, 39, 40 3. Describe laboratory tests used to evaluate liver functions (Phipps, Long, and Woods p. 601).

3, 39, 40 4. Describe the following diagnostic procedures related to the liver and biliary system including nursing strategies related to preparation of the patient:*

a. cholecystography
b. cholangiography
c. angiography
d. ultrasound examination
e. endoscopy
f. biopsy of the liver

*pp. 601-605 Phipps, Long, and Woods

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3, 39, 40	5. Describe the (a) etiology, (b) pathophysiology, (c) transmission, (d) prevention, and (e) signs and symptoms of Type A and Type B viral hepatitis.
39, 40	6. Describe the treatment and common nursing strategies related to the patient with Type A and Type B viral hepatitis.
3, 39, 40	7. Describe the etiology, pathophysiology, and signs and symptoms of cirrhosis.

Read: Phipps, Long, and Woods, pp. 601-605, and 676-690

UNIT IV SECTION B

Care of the Patient with Deviations of the Liver and Related Structures, Continued

1, 39, 40 — 1. Define the following terms:

esophageal varices
hepatic coma
asterixis (liver flap)
Lactulose
cholecystitis
cholelithiasis
biliary atresia
cholecystectomy
T tube
pancreatitis

39, 40 — 2. Describe the treatment and common nursing strategies related to the care of the patient with cirrhosis.

39, 40 — 3. Describe the: (a) pathophysiology, (b) treatment, and (c) common nursing strategies related to the following sequelae of cirrhosis:

a) fluid and electrolyte changes
b) bleeding tendencies, anemia, and infection
c) portal hypertension
d) bleeding esophageal varices
e) hepatic coma

39, 40 — 4. Define outcome criteria for the person with chronic liver disease.

3, 39, 40 — 5. Describe the (a) etiology, (b) pathophysiology, and (c) nursing strategies related to cholecystitis and cholelithiasis.

39 — 6. Describe the surgical management of the patient with biliary disease including pre and post-operative nursing strategies.

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Unit V Section B

Care of the Patient with Deviations of the Liver and Related Structures - Continued

3, 39, 40	□ ★	7. Describe the following lab tests related to the diagnosis of pancreatic disease: a. amylase b. lipase c. glucose
3, 39, 40	□ ★ ▱ ●	8. Describe the (a) etiology, (b) pathophysiology, (c) signs and symptoms, and (d) nursing strategies related to the patient with acute or chronic pancreatitis.

Read: Phipps, Long, and Woods, pp. 690-711.
Thompson, M. Managing the patient with liver dysfunction. Nursing 81, November. (On reserve.)

Enrichment: Fredette, S. L., When the liver fails, AJN 1984, Jan., 64-67.

Computer program, "Mr. Merra, A Patient with Liver Disease"

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HEPATITIS

I. Def.: Inflammation of the liver

II. Causes: Viruses, bacteria, toxic sustances (Pathology + clinical manifestations vary some. Clinical management of pt with hepatitis quite similar. Any form of hepatitis can lead to postnectoric cirrhosis if treatment not effective.)

III. Toxic hepatitis: Occurs after exposure to certain substances (hepatotoxins) such as certain drugs + industrial chemicals. Drugs usually cause hepatitis via a sensitivity reaction (ex - chlorpromazine); industrial chemicals via a toxic reaction (ex - carbontetrachloride). Damage in toxic hepatitis usually dose dependent.

Prevention: Teach danger of injudicious use of materials known to be harmful to liver. Read instructions on labels of potentially harmful products and follow! Inhalation of fumes containing Carbon Tetrachloride, + other compounds such as Nitrobenzene, tetrachlorethane, Carbon Disulfide + Dinitrotoluol esp. dangerous. Avoid exposure to fumes by using as directed + with open windows + good ventilation.

VIRAL HEPATITIS

*All types cause inflammation of the liver + similar sequelae. Viral hepatitis is a reportable ds in all states.

TYPE A (HAV)
(Infectious Hepatitis)

Etiology + Patho: Caused by Type A hepatitis virus. Serum of infected persons contains HA Ab (Hepatitis A antibodies). Endemic some areas of world, esp. due to fecally infected water, milk or food (esp. raw or steamed shellfish).
Transmitted by: *Fecal-oral route (human feces + blood) + by parenteral or direct contact.
Sources of infection: contaminated food, water, needles and surgical instruments.
Incubation period: short, 10-40 days; ave 30.

Mortality: ∠ 0.5%

TYPE B (HBV)
(Serum Hepatitis)

Etiology + Patho: Caused by Type B hepatitis virus. HB_sAg found in serum & Dane particles (free virus). Found worldwide. Incidence ↑ ed in highly populated areas + where hygiene is poor.

Transmitted by: *contact with serum, plasma or blood of infected person (parenteral, oral, direct or sexual contact).
Sources of infection: contaminated needles, surgical instruments or blood products.

Incubation period: long, 45-180 days; ave 90. Health workers, pts receiving multiple transfusions + on dialysis at high risk. HB_sAg + Anti-HB_s used to detect ds.
Mortality: ∠ 1-5%

Type A (HAV)-cont'd

Immunity: to HAV but not HBV or non-A non-B. Recovery: usually ∃ sequela. Chronic ds almost absent.
Prevention: with immune serum globulin (ISG) if given early. Pt is a virus carrier through preicteric stage. Free of virus within 7-9 days ∃ jaundice occurs. *Most infectious just before onset of Sx.

TYPE B (HBV)-cont'd

Immunity: to HBV but ∃ HAV or non-A non B. Recovery: about 10% develop chronic lever ds.
Prevention: If ISG with a high titer of HB_SAb is given the severity of the the ds can be ↓ ed. New HB vaccine (very expensive; used in high risk populations).

PATHOPHYSIOLOGY:

Reflects cellular damage to liver. Hepatocyte has alteration in function resulting from damage caused by virus and resulting inflammation. Degree of impairment depends on amount of damage.

Cells become inflammed and may necrose. Inflammation, degeneration and regeneration often occur simultaneously expecially in nonfatal viral hepatitis. Majority of patients recover nl liver function with minimal or no fibrosis. (Submassive hepatic necrosis, fulminant viral hepatitis or subacute fatal viral hepatitis may occur however. Chronic hepatitis can also occur but "virtually absent" with type A.)

SIGNS & SYMPTOMS:

1. May have hx of recent exposure to hepatotoxic agents, jaundiced persons, or recent blood transfusions or infections.
2. Sx vary. usually appear 4-7 days ∃ jaundice appears.

Preicteric Stage: lasts about 1 wk. H.A., ↑ ed temp, chills, N&V, dyspepia, *anorexia, malaise, + arthralgia. In severe cases, may have bleeding tendencies due to ↓ ed prothombin synthesis.

Icteric Stage: May last 4-6 wks. Impaired excretion of conjugated bilirubin → ↑ ed serum levels (hyperbilirubinemia) causing jaundiced skin + sclera; ↓ ed bile pigment in feces → clay colored stools; *high levels of conjugated bilirubin excreted in urine causing tea colored, dark amber urine. Pruritis 2° bile pigments in skin. Abd pain 2° stretching of Glisson's capsule (liver is swollen).

Posticteric stage: Recovery phase. Begins with disappearance of jaundice. Lasts from few wks to several mos. Complete recovery with 6 mos.

3. Lab tests: Demonstrate hyperbilirubinemimia, bilirubinuria, + elevated serum enzymes.

PREVENTION:

Type A: Practice + teach good personal hygiene. Handwashing (esp. food handlers) essential! Persons with hepatitis A should not work in food services while a carrier of virus. Treatment of municiple water supplies impt. Pvt water supplies + fishing waters can be major source of infection. Properly autoclave equipment used to penetrate skin. Use disposable syringes + needles only 1 time. Dispose of safely in puncture resistant containers. With pts who have virus, take great care in handling fecal matter, urine, + objects contaminated by these. Wear gloves + gowns when handling feces + urine containers + soiled linen. (Private room not necessary for adults.) Place pt on enteric + blood precautions. Explain precautions + reasons for them to pt + visitors. Use individual thermometers. (Use gloves if rectal temp necessary.) Dispose tissues in impervious bag + burn. Use disposable dishes. Known or suspected carriers should not donate blood. If traveling to area where endemic, get ISG. Rpt exposure to hepatitis to physician (esp. if pregnant). ISG given.

Type B: If exposed to type B, high B titer ISG may help. Screen blood donors for presence of HB_sAg + prohibit donation if pos. (Use only volunteer donors). Use blood products only when necessary. Use disposable needles + syringes. Non-disposable equipment must be sterilized. Place on blood + needle precautions. (Do not recap needles or bend them due to danger of accidental needle puncture.) New vaccine for prevention of hepatitis B. (Very expensive---used in high risk populations.)

NON A, NON B HEPATITIS

Cause: More than one virus may be responsible. Sources: contaminated blood, needles, or surgical instruments. Transmission: parenterally through contaminated blood, serum or plasma. Seen primarily after transfusions but also in pts on hemodialysis. Mortality: 1-3%. Immunity: to non A, nonB but not to HBV or HAV. *Approx. 20-25% develop chronic complications.

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NS 217

Pancreatitis: Inflammatory Disease of Pancreas

I. Pathophysiology: Autodigestion of the pancreas by proteolytic and lipolytic enzymes activated in the pancreas rather than in the duodenum. Autodigestion leads to edema, hemorrhage, vascular damage, necrosis.

II. Etiology: Gallstones, alcohol, idiopathic processes are three most important causes. (Alcohol abuse is the most common cause.)

III. Signs and Symptoms:

A) Acute pancreatitis: Severe impressive pain, often located in left, upper quadrant or epigastric area. Often radiates to back. Nausea, vomiting, abdominal tenderness, temperature elevation. Fluid and electrolyte imbalances usually present. Shock may result. On P.E., may find muscle rigidity, abd., tenderness, jaundice, and decreased bowel sounds.

B) Chronic pancreatitis: Dull pain alternated with acute pain, nausea, vomiting, fever and jaundice. Eventually diabetes with hyperglycemia occurs from distruction of Islet of Langerhans. (Blood glucose will be elevated.) Reduction in enzyme secretion occurs leading to malnutrition and wt loss. Abd. distention with flatus and cramps occur. Frequent foul, fatty stools (steatorrhea) occur from inability to digest fats.

IV. Lab Tests: Serum Amylase - NL 80-150 units. In pancreatitis usually elevated in 24-48 hrs. May range from 300-800 u. Serum lipase - nl 0-1.5 units. Elevated in pancreatitis. Reaches peak in 72-96 hours.

V. Interventions and Nursing Strategies:

A) Acute Pancreatitis:

1) Maintain circulatory volume and replace fluid and electrolyte loss. (Fluid losses may be massive.) Colloids and electrolyte solutions may be given. Monitor CVP, urine output, serum electrolytes.
2) Relieve pain. Demerol given rather than morphine which can cause Sphincter of Oddi spasm.
3) Reduce pancreatic stimulus. NPO. NG tube to intermittent suction. Anticholinergics such as Probanthine may be given to reduce pancreatic secretion and relax Sphincter of Oddi. (Value questionable.) Antacids. As symptoms regress and pt improves, will be started on clear liquids and progressed to a diet that avoids pancreatic stimulus: low fat, no alcohol, no caffeine.
4) Prevent hyperglycemia - Test urine for sugar and acetone. Frequent blood glucose levels. Insulin may be given.

B) Chronic Pancreatitis:

1) Reduce pancreatic stimulus by low fat diet, avoidance of alcohol and caffeine, small meals. Oral antacids to reduce gastric acid stimulus to pancreatic juice secretion.
2) Alleviate chronic fat indigestion---give pancreatic extracts (Pancreatin or VioKase) with meals to aid digestion. (Contain amylase, lipase, and tryspin.)
3) Treat diabetes if present. Teach pt. to monitor for S+S of diabetes and report to Dr. if noted.
4) Control pain - may try biofeedback, TENS, etc. for pain of chronic pancreatitis. Referral to pain clinic if relying on large doses of narcotics for pain control.

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Unit V, Section A

Care of the Patient with Deviations of the Endocrine Subsystem

1. Define the following terms:

1, 39 ○△▱□ endocrine system
● pituitary gland (master gland)
adenohypophysis (anterior pituitary)
neurohypophysis (posterior pituitary)
releasing factor
inhibiting factor
closed-looped negative feedback system
hyperpituitarism
gigantism
acromegaly
transphenoidal surgery
hypophysectomy
panyhpopituitarism
hypopituitarism
dwarfism
syndrome of inappropriate antidiuretic hormone (SIADH)
dilutional hyponatremia
diabetes insipidus
vasopressin (pitressin)

OVERVIEW

39 ○△▱□ 2. Review the anatomy and physiology of the endocrine
● subsystem with a special focus on the negative feedback system of hormonal control.

Read: Phipps, Long and Wood, pp 583-588.
Hahn, Barkin, Oestrich; Chapter 28, pp. 821-870.

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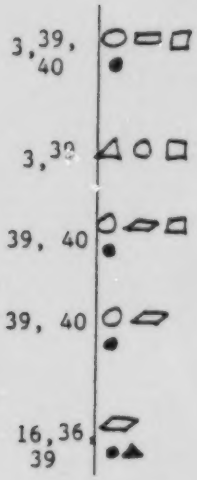
Unit V. Section A

Care of the Patient with Deviations of the Endocrine Subsystem - Continued

Pituitary



1. Discuss objective and subjective data utilized in assessment of the patient with pituitary function deviations.
2. Relate alterations of pituitary function to the clinical manifestations seen in the patient.
3. Describe current strategies useful in management of pituitary gland deviations.
4. Discuss indications, actions, side effects, and nursing implications when pituitary hormone replacement is implemented.
5. Design a teaching outline for a patient who is dependent on pituitary hormone replacement.

Read: Phipps, Long, Woods; pp. 616-22.

Hahn, Barkin, Oestreich; p. 823.

Enrichment: Solomon: The hypothalamus and pituitary gland; NCNA 15:435-451. 1980

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Unit V, Section B

Care of the Patient with Deviations of the Endocrine Subsystem, continued

Terminology

1,39 o □ ●

1. Define the following terms:

goiter
thyroiditis
hashimoto's struma
hypothyroidism
cretinism
myxedema
hydrophilic mucopolysaccharides
myxedema coma
hyperthyroidism (Graves' disease)
exopthalamus
thyroid storm
radioactive iodine therapy
euthyroid
total thyroidectomy
subtotal thyroidectomy
tetany
calcium gluconate
hyperparathyroidism
osteopenia
osteitis fibrosa cystica
hypoparathyroidism
Chriostek's sign
Trousseau's sign
carpal spasm
adrenal cortex
adrenal medulla
pheochromocytoma
Addison's disease
Adrenal crisis (Addisonian crisis)

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UNIT V Section B

Care of the Patient with Deviations of the Endocrine Subsystem, Continued

Thyroid

3,39 1. Discuss the pathophysiology of thyroid disease related to the clinical picture of the patient who had hypofunction, hyperfunction, or inflammatory disease.

3,39, 40 2. Describe subjective and objective assessment data utilized in identifying thyroid gland deviations.

39 3. Compare various strategies implemented for achieving and maintaining equilibrium with thyroid gland deviations.

4. Write discharge plans for a patient with a deviation of the endocrine subsystem resulting from a thyroid disorder.

* SECTION B CONTINUED ON NEXT PAGE.

Read: Phipps, Long, Woods; pp. 622-631.

Hahn, Barkin, Oestreich; pp. 833-841.

Enrichment: Hallal: Thyroid disorders, AJN 77:418.

UNIT V Section B

Care of the Patient with Deviations of the Endocrine Subsystem, Continued

Parathyroid

3, 39,40 1. Specify adaptations occurring to patients affected with hyperparathyroidism or hypoparathyroidism.

39,40 2. Discuss the definitive strategies for establishing and maintaining equilibrium with parathyroid disorders.

39 3. Contrast primary and secondary hyperparathyroidism from the standpoint of etiology and strategies indicated.

Read: Phipps, Long, Woods; pp. 631-634.

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UNIT V Section B

Care of the Patient with Deviations of the Endocrine Subsystem, Continued

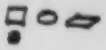
Adrenal

39

1. Differentiate between deviations originating in the adrenal medulla and adrenal cortex as to cause, treatment and complications.

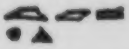
12, 39

2. Describe the clinical manifestations seen in the patient with adrenal disorders in relationship to the pathophysiology.

39 

3. Explain the following physiological effects of cortisol from the standpoint of normal production and/or therapeutic administration.

   a. circadian rhythm
   b. immunosuppression
   c. effects of healing
   d. altered levels related to stress
   e. psychological/mental changes
   f. weight gain

16, 39, 36, 40 

4. Design discharge plans by utilizing the teaching-learning process, for patients on long term steroid therapy.

* SECTION B CONTINUED ON NEXT PAGE.

Read: Phipps, Long, Woods; pp. 634-642.

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Unit V, Section C
Care of the Patient with Deviations of the Endocrine Subsystem (cont'd)

1, 39 1. Terminology

☆□ ● ■ A. Define the following terms

beta cells (Islets of Langerhans in pancreas)
diabetes mellitus (Type I, Type II)
diabetes ketoacidosis (DKA)
glucagon
glucose
glucogenesis
gluconeogenes
glycogen
glycosuria
hemoglobin A, C
home blood glucose monitoring (HBGM)
hyperglycemia
hyperclycemia, hyperosmolar, nonketotic coma (HHNC)
hypoglycemia
insulin (endogenous, exogenous)
insulin pump
ketones
lipolysis
lipodystrophies (atrophy, hypertrophy)
polydipsia
polyphagia
polyuria
somogyi phenomenon (effect)

B. Complications
atherosclerosis
nephropathy
neuropathy
retinopathy

C. Diagnostic and Evaluative Testing
blood glucose (give normal values)
Chemstrip BG with or without Acu chek
Dextrostix with Glucometer
Visudex
urine glucose
Clinitest (tablet)
Testape (tape)
Diastix (stick)
urine acetone
Acetest (tablet)

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Unit V, Section C

1. Contrast the pathophysiology of Type I and Type II diabetes mellitus and the deviations which occur.

2. Describe metabolic short term complications occurring secondarily in both types of diabetes mellitus as well as long-term problems commonly seen.

3. Explain the strategies which promote adaptation for the patient with diabetes mellitus and those which prevent complications.

4. State the objective and subjective data utilized in diagnosing and evaluating the patient with diabetes mellitus.

5. Explain the therapeutic strategies of diet, insulin or hypoglycemic agents, exercise and the interrelationship of each modality.

6. Compare the various types of insulins from the standpoint of indications, action, side effects and methods of administration.

7. Given a diet prescription, calculate and plan menus utilizing the ADA Exchange list.

8. Discuss the adaptations of the psychological and sociological subsystems when the patient has diabetes mellitus and relate these to the developmental needs of various age groups.

9. Write a teaching plan of a newly diagnosed patient with diabetes mellitus including available community resources.

Read: Phipps, Long and Woods, 642-671.
Waley and Wong, 876-891.
Kozier and Erb, 962-964.
Smith and Duell, 266-267.
Hahn, Barkin, Oestrich, 855-863.

View: VT 830

Enrichment: Miller and White, Diabetes assessment guide. AJN 80:1314-1316.
Moorman, N. H. Acute complications of hyperglycemia and hypoglycemia, NCNA:18:707-719 (1983).
Nemchik, R. Diabetes today: a startling new body of knowledge, RN:44:21-37 (1982).
Resler, M. M., Teaching strategies that promote adherence. NCNA 18:799-811 (1983).
Computer simulations: Preparing Insulin for Injection,
Mr. Richards, A Man with Newly Diagnosed Diabetes

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COMPARISON OF INSULIN-DEPENDENT DIABETES MELLITUS (TYPE I) AND NON-INSULIN-DEPENDENT DIABETES MELLITUS (TYPE II)

The term insulin-dependent and non-insulin-dependent are used in place of the terms juvenile, or growth, onset and adult, or maturity onset because the latter two terms misrepresent their respective patient populations to some extent. A significant number of adults develop the "juvenile" form of the disease. Using the term insulin-dependent avoids confusion in these instances. (Refer to Phipps, Long and Wood for classification of four types, page 643.)

Variable	Insulin-dependent diabetes	Non-insulin-dependent
Prevalence	20% of diabetic population	80% of diabetic population
Onset of illness	Usually before age 40	Usually after age 40
Diagnosis	Usually made on basis of clinical manifestations; patient often quite ill	Often involves oral glucose tolerance test; patient may be asymptomatic
Insulin level	0 to small amounts	Slightly decreased to high levels of insulin
Weight pattern	Thin: prior to diagnosis will lose weight in spite of eating; may still be overweight at time of diagnosis but have a history of significant recent weight loss.	Overweight (may be as much as 20% over desirable body weight)
Sensitivity to insulin	High	Low
Acute complications	Ketoacidosis	Nonketotic hyperosmolar hyperglycemic (NHHC) coma (this may occur occasionally in the insulin-dependent diabetic patient)
Management of:	Goals:	Goal:
Diet	Achieve and maintain desirable body weight Distribution of nutrients to cover hypoglycemic action of exogenous insulin	Achieve and maintain desirable body weight Distribution of nutrients to cover hypoglycemic action of oral hypoglycemic agents
Exercise	Planned periods of exercise encouraged; adjunct to insulin therapy	Planned periods of exercise encouraged; facilitates weight loss
Blood glucose testing	Chemstrips (with Acu Chek) Dextrostix (with Glucometer)	May be recommended but not usually on daily basis
Urine testing	For glucose, Clinitest recommended For ketones, either Ketostix or Acetest recommended	For glucose, Tes-Tape or Diastix recommended For ketones, not necessary to test
Medication	Insulin Glucagon (to counteract severe hypoglycemia)	No medication or oral hypoglycemics
Foot Care	Inspection, cleanliness, protection	Inspection, cleanlinesss, protection

COMPARISON OF HYPERGLYCEMIA AND HYPOGLYCEMIA
(Effects of Too Much and Too Little Blood Sugar)

	Hyperglycemia	Hypoglycemia
Symptoms	weakness ↑ thirst dry mouth, soft eyeballs frequent, scant urination ↓ appetite or ↑ appetite nausea, vomiting abdominal tenderness acetone breath Kussmaul respirations coma	weakness nervousness shakiness irritability emotional lability impaired vision headache hunger ←perspiration convulsions coma
Urine Sugars	consistently high on second-voided specimen	negative
Urine Ketones	negative to large	negative
Blood Glucose	> 300 mg/100 ml	< 60 mg/100 ml
Causes	too little insulin too much food, wrong kinds of food decreased exercise without decreased food intake emotional stress infection	too much insulin too little food increased exercise without food supplements oral hypoglycemia agents
Progression	gradual: hyperglycemia → ketosis → acidosis → coma → death	rapid: hypoglycemia → shock → coma → death
Treatment	regular insulin fluid replacement electrolyte replacement	simple, fast-acting sugar by mouth (orange juice, cola, candy) 1 mg. glucagon SC; if no effect in 10-15 min repeat once 50 ml. of 50% glucose I.V.

Sources: Jordan, Judy. Acute care of diabetes. In NURSING MANAGEMENT OF DIABETES MELLITUS, ed. by D. W.Guthrie, and R. A. Guthrie, ST. Louis, C. V. Mosby Co. 1977, pp. 73-74.

Steinke, Jurgen, and Soeldner, J.S. Diabetes mellitus. In HARRISON'S PRINCIPLES OF INTERNAL MEDICINE, 8th ed. edited by G. W. Thorn and others. New York, McGraw-Hill Book Co., 1977, pp. 576-579.

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DO'S AND DONT'S OF DIABETIC FOOT CARE

Include the following aspects in daily care and teaching for patient with diabetes mellitus (or other peripheral vascular diseases).

DO:

1. Wash feet daily with soap and warm (not hot) water. Test temperature with wrist or elbow.
2. Dry feet thoroughly——use a nonirritating foot powder in shoes and on feet to keep them dry. (cornstarch/powder substitute)
3. Inspect feet daily for changes in color of skin (blue or purplish), cuts, scratches, blisters, athelete's foot, and changes in skin temperature and sensation. Assess peripheral pulses in lower extremities. Record and report to physician any significant findings related to these factors. The diabetic is at high risk for infection and impaired healing due to decreased circulation in lower extremities and elevated blood glucose levels. This can ultimately lead to amputation.
4. Cut toenails straight across, even with end of toe. File rough edges with an emory board if necessary. (Check hospital policy on cutting toenails——doctor's order may be required.)
5. Wear clean socks and stockings every day.
6. Buy new shoes late in day. Break in slowly to avoid blisters. Feel and inspect insides of shoes for sources of irritation before wearing.

DON'T:

1. Wear socks or stockings with a hole in them.
2. Wear tight shoes.
3. Go barefooted ever.
4. Mow yard in tennis shoes or sandles.
5. Cut corns or callouses.
6. Use corn remover medicines.
7. Use heating pads or hot water bottles on your feet.
8. Prop your feet in front of fireplace or heaters to warm them.
9. Put adhesive tape directly on your skin.
10. Wear circular garters or nylon stockings with elastic tops.

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UNIT VI, Section A

Care of the Patient with Deviations of the Cardiovascular Subsystem

Terminology

1,39

1. Define the following terms related to sections A, B, and C.

acquired heart disease
acute endocarditis
acute myocardial infarction
acute pericarditis
angina pectoris
arrythmia
cardiac enzymes
cardiac monitoring
cardiac pattern
cardiomyopathy
cardiopulmonary arrest
cardiopulmonary bypass
cardioversion and defibrillation
chronic pericarditis
congenital heart disease
congestive heart failure
coronary artery disease
coronary occlusion
coronary thrombosis
cumulative effects
digitalization
electrocardiogram
electrode (for cardiac monitoring)
endocarditis
fibrillation
left ventricular failure
myocardial infarction
myocarditis
pericarditis
pulmonary edema
rales
rheumatic heart disease
right ventricular failure
sinus bradycardia
sinus rhythm
subacute bacterial endocarditis
valvular disease

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UNIT VI, Section A

Care of the Patient with Deviations of the Cardiovascular Subsystem - Continued

CARDIAC FUNCTION, ELECTROCARDIOGRAM, CV ASSESSMENT

39 1. Describe the normal cardiac cycle from the standpoint of structure, circulation and conduction.

3, 39 3. Identify subjective and objective data necessary for a systematic cardiovascular assessment inclusive of:

a. patient's history
b. physical assessment
c. common diagnostic tests
d. risk factors (modifiable and non-modifiable)

39 4. Relate the components of the normal electrocardiogram to the cardiac cycle.

39 5. Utilizing Lead II in cardiac monitoring, identify:

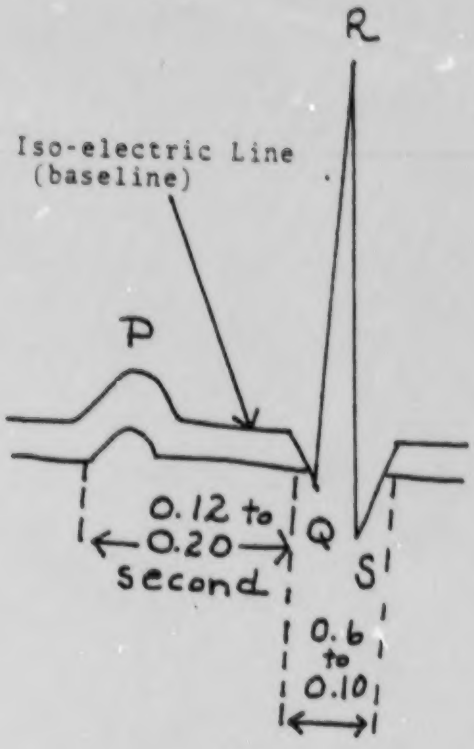
normal sinus rhythm

Read: Phipps, Long and Wood. pp. 1029-1054, 1057-1063, 1066-1068.

Kozier and Erb. pp. 986-987.

Smith and Duell. pp. 700-701.

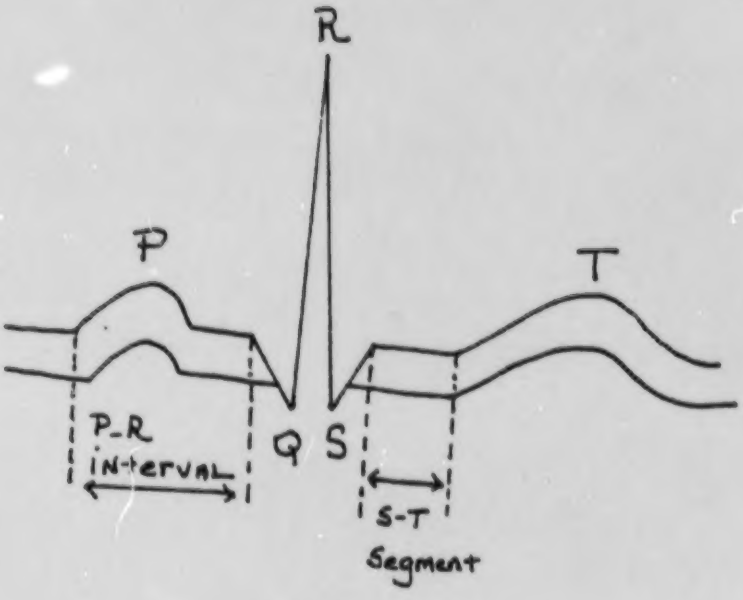
View: VT 387 The Work of the Heart (19")
VT 1172 Understanding EKG's (60")
VT 738 The Normal Heart and EKG (23")

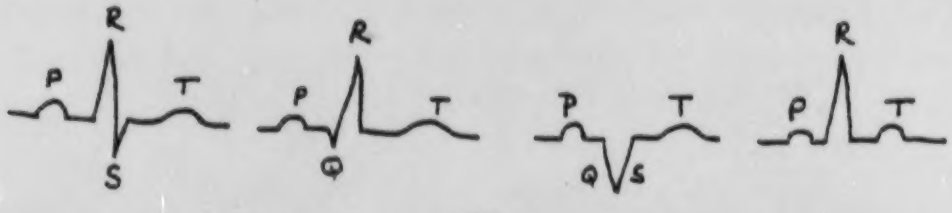


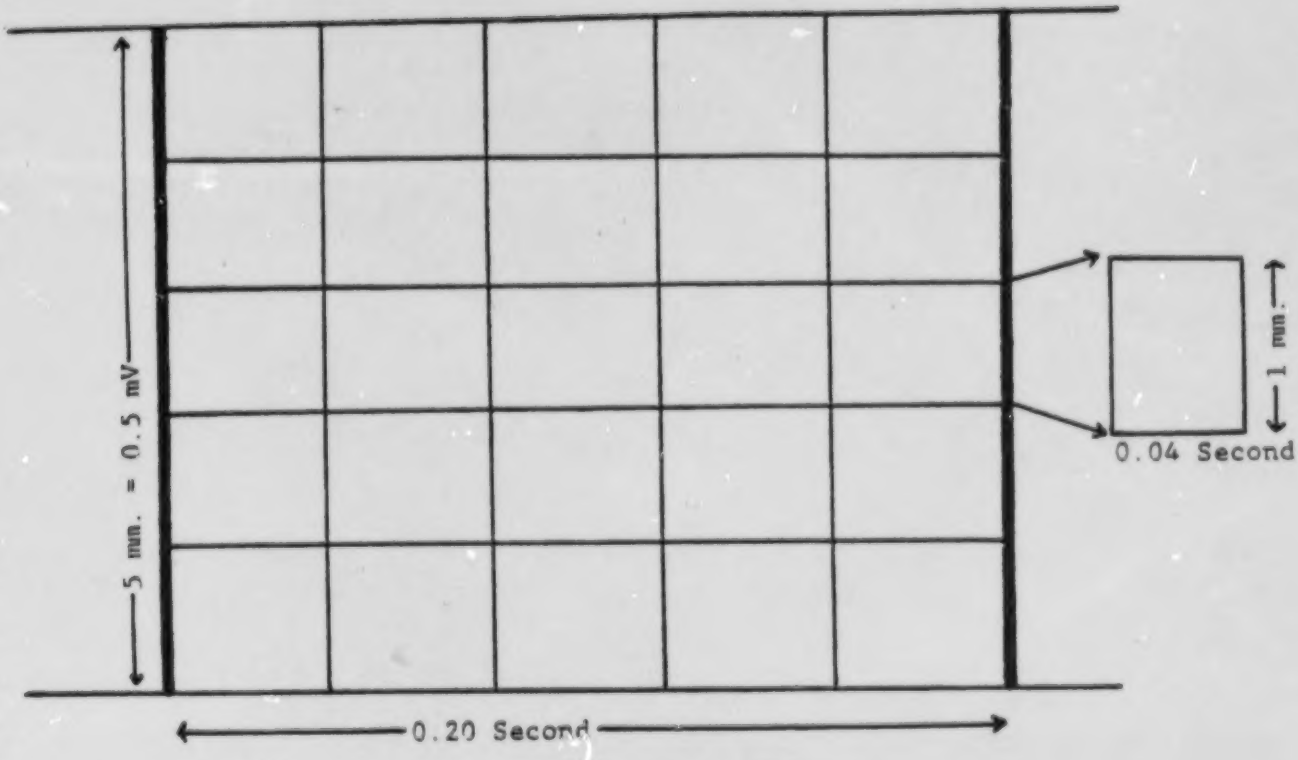
Q Wave - an initial deflection downward

R Wave - an initial upright deflection; may follow a Q wave

S Wave - the first downward deflection following ar R Wave

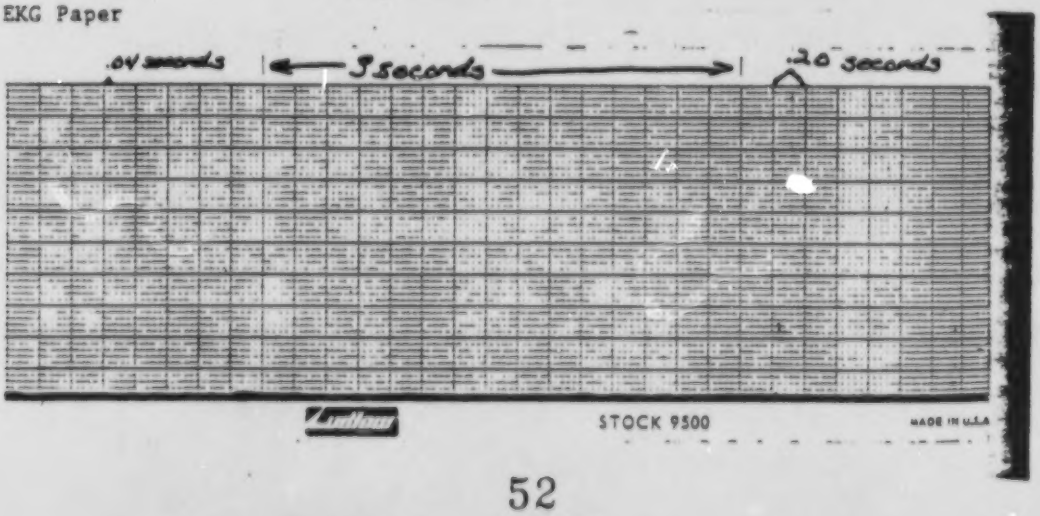






Time lines of the electrocardiogram. The separation between the heavy lines is 0.20 second and between each small light line 0.04 second.

B. EKG Paper



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I. Analysis of the Electrocardiogram

A. Normal Electrocardiogram

The electrical current produced by the depolarization and repolarization of the heart muscle is recorded as a series of positive and negative waves on the electrocardiogram referred to as P, Q, R, S, and T wave.

1. Baseline or iso-electric line is the point of departure for the P, Q, R, S, and T wave.
2. P wave is produced by depolarization of the right and left atria, and is the first wave of the normal electrocardiogram.
3. Following the P wave, no external wave is produced as the impulse travels through the A-V node and the ventricular conduction system.
4. QRS complex is produced by the depolarization of the ventricular muscle.

   a. Q wave - an initial negative wave
   b. R wave - first positive wave of the QRS complex
   c. S wave - a negative wave after the R wave in the QRS complex.

5. T wave is produced by repolarization of the ventricles (An atrial repolarization wave is usually not seen on the EKG because of its low voltage or because it is buried within the QRS complex.).
6. P-R interval, from the beginning of the P wave to the beginning of the QRS complex, lasts .12 to .20 seconds.
7. QRS interval, from the beginning of the first wave of the QRS complex to the end of the QRS complex, normally lasts from .06 to .10 seconds.
8. S-T segment extends from the end of the QRS complex to the beginning of the T wave. May be elevated or depressed with myocardial abnormalities or injury.

B. EKG Paper

1. Vertical lines indicate time.
2. Horizontal lines indicate voltage.
3. See example of EKG strip.

C. Measurements, Calculations, and Observations.

1. Survey the EKG strip checking for the presence or absence of regularly occurring P-QRS-T couplexes.
2. Examine P waves

   a. Present or absent
   b. Normal or abnormal shapes
   c. Related to QRS complex

3. Measure the P-R interval.
4. Examine the QRS complexes.

   a. Normal or Abnormal shapes
   b. Measure the QRS interval

5. Determine the regularity or irregulatity of the rhythm by measuring and comparing the R to R intervals.

   a. Absolutely regular - equal R-R intervals
   b. Essentially regular - occasional variation of up to .04 seconds in R-R intervals
   c. Irregular - variation in R to R intervals

6. Calculate the ventricular and atrial rate.

Adapted from: Erlanger Training Department. Critical Care Course Manual. Chattanooga, TN: Erlanger Medical Center, 1981.

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NORMAL SINUS RHYTHM

Sinus Rhythm is diagnosed according to the following criteria:

A. Regularly occurring P-QRS-T complexes

B. Each P wave smooth, contoured, upright in leads I, II, III, and followed by a QRS complex

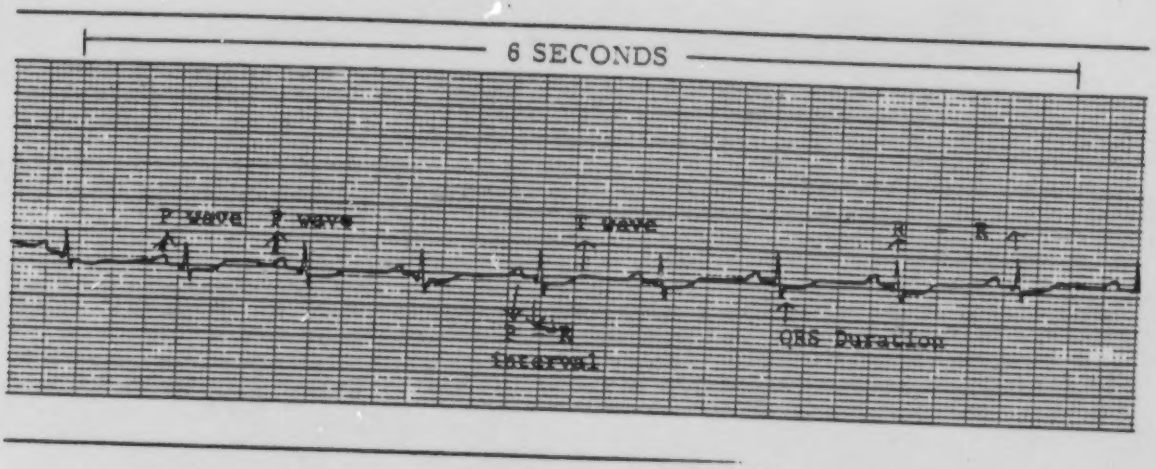
C. P-R interval of .12 to .20 seconds

D. Uniform QRS complexes usually lasting .04 to .09 seconds

E. Regular R to R intervals

F. Ventricular and atrial rate of 60 to 100 times per minute

ECG



Presence or absence P-QRS-T complexes — Is there a P wave for every QRS? Any dropped QRS? Every QRS followed by a T wave?

All present

P waves

- Configuration: small peaked
- Rate: since there is a P wave for every QRS = 85
- Rhythm: distance from P wave to P wave are all equal

P-R interval .04 x 4 small tiny squares = 0.16 sec

Ventricular Rate 8.5 x 10 = if $17/\overline{1500}^{88}$ $3.5/\overline{300}^{85}$

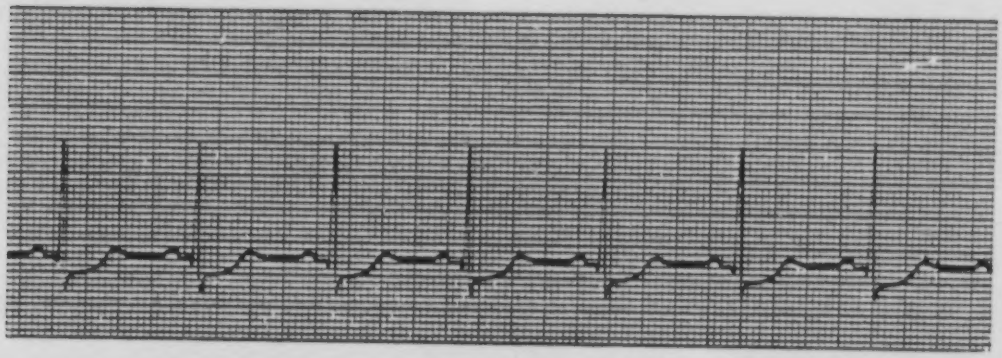
Ventricular Rhythm (R-R interval) (See below.) Regular

QRS Duration: .04 x 1½ small tiny squares = .06 sec.

Interpretation: Since rate is 85 and all above normal strip is normal sinus rhythm

To check rhythm--ventricle--mark on a piece of paper a little line that corresponds to the R wave of the QRS complex. Mark that same paper with a line for the R wave of the next QRS complex. Take your paper with the two lines and check R-R intervals of all QRS complexes.

To check rhythm P Wave--same way as for ventricle except from P to P wave



Presence or absence P-QRS-T complexes

P waves

Configuration

Rate

Rhythm

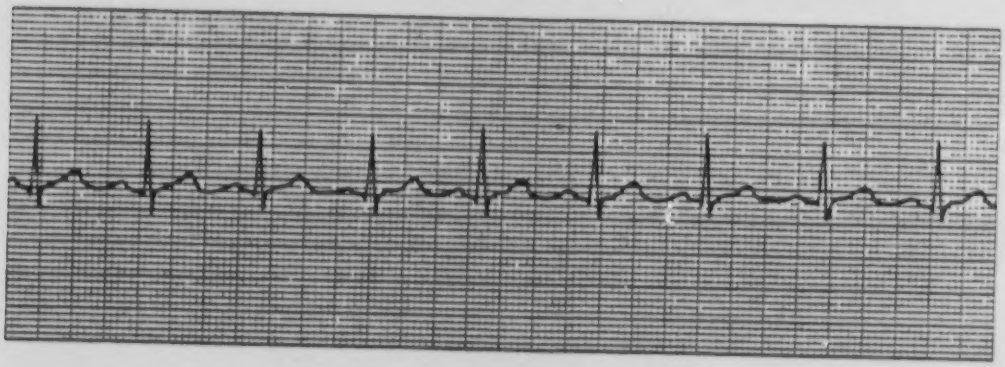
P-R interval

Ventricular Rate

Ventricular Rhythm (R-R interval)

QRS Duration

Interpretation



Presence or absence P-QRS-T complexes

P waves

- Configuration
- Rate
- Rhythm

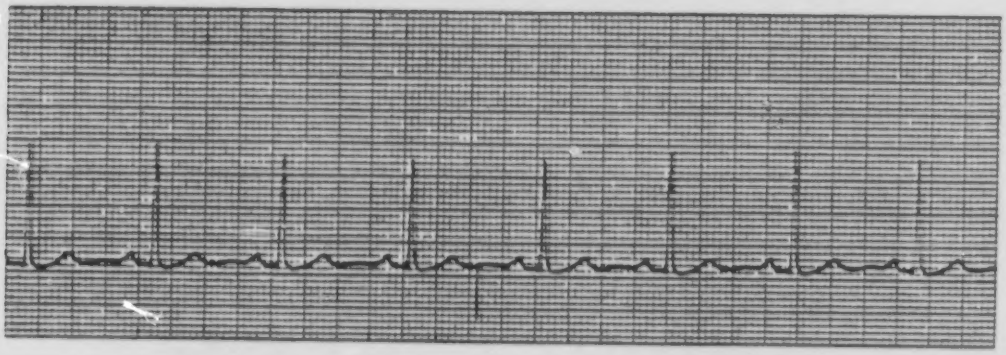
P-R interval

Ventricular Rate

Ventricular Rhythm (R-R interval)

QRS Duration

Interpretation



Presence or absence P-QRS-T complexes

P waves

- Configuration
- Rate
- Rhythm

P-R interval

Ventricular Rate

Ventricular Rhythm (R-R interval)

QRS Duration

Interpretation

UNIT VI, Section B

Care of the Patient with Deviations of the Cardiovascular Subsystem, Continued

INFLAMMATORY PROBLEMS AND CORONARY ARTERY DISEASE

39,40

1. Discuss the etiology, pathophysiology and strategies for managing inflammatory and valvular heart disorders:

   rheumatic heart disease
   pericarditis
   myocarditis
   endocarditis

3, 40

2. Contrast subjective and objective data derived from assessment of a patient with angina pectoris and myocardial infarction.

40

3. Differentiate the strategies utilized for treating angina pectoris and myocardial infarction

12, 40

4. Relate the common complications following a myocardial infarction and the appropriate strategies for each.

12, 40

5. Identify psychological and sociological subsystem adaptations which result from deviations of the cardiovascular subsystem.

16, 36, 40

6. Utilizing the teaching-learning process, design a teaching plan for the patient and his family following a myocardial infarction regarding these aspects:

   a. pharmacological
   b. nutritional
   c. activity/exercise/sexual role
   d. disease process and danger signals

Read: Phipps, Long and Woods. pp. 1102-1105 (inflammatory)
pp. 1111-1127 (CAD)

View: VT 1118 Acute Myocardial Infarction

Enrichment: Computer Simulation: Mr. Jones, A Businessman with Indigestion"

UNIT VI, Section C

Care of the Patient with Deviations of the Cardiovascular Subsystem, Continued

Congestive Heart Failure

39 1. Define congestive heart failure related to etiology, classification and pathophysiology.

39 2. Describe the compensatory mechanisms which are activated with congestive heart failure.

39 3. Differentiate in etiology and symptomatology of congestive heart failure in left versus right heart failure.

39,40 4. Explain the strategies and rationale for treatment of congestive heart failure including:

a. digitalization, other cardiac drugs, and diuretics
b. nutrition and dietary adaptations
c. activity
d. fluid management

16,39,40,41 5. Construct discharge teaching plans encompassing strategies for maintaining an optimum steady state for the patient with CHF.

Read: Phipps, Long, and Woods. pp. 1127-1137.

Hahn, Barkin, Oestreich. pp. 567-576.

View: VT 1117 Complication: Heart Failure

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Unit VI, Section D
Care of the Patient with Deviations of the Cardiovascular Subsystem, Continued

1,39 1. Define the following terms:

cerebral vascular accident (stroke)
cerebral thrombosis
cerebral embolism
transient ischemic attack (TIA)
hemiplegia
hemianopsia
anosognosia
carotid endarterectomy
intracranial hemorrhage
aphasia
expressive aphasia
receptive aphasia

39,40 2. Describe the etiology and pathophysiology of cerebral vascular accidents including:

a. cerebral thrombosis
b. cerebral embolism
c. cerebral hemorrhage

39,40 3. Differentiate transient ischemic attacks (TIA's) from C.V.A. briefly outlining their diagnosis, treatment, and related nursing strategies.

4. Identify common clinical manifestations of C.V.A. including:
a. motor loss
b. communication loss
c. visual field loss
d. sensory loss
e. bladder and bowel impairment
f. alterations in psychosocial adaptation

39,40 5. Describe nursing strategies related to the care of the patient with a C.V.A. during the initial phase including emergency care.

39,40 6. Outline the nursing strategies to be implemented in the rehabilitative phase of C.V.A. including the following aspects:
a. prevention of deformities
b. retraining of affected extremities
c. mobilization of the patient
d. promotion of self-care and independence in activities of daily living (ADL).

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39,40	7.	Differentiate the clinical picture and nursing care of the patient with C.V.A. due to INTRACRANIAL HEMORRHAGE from that due to thrombus or embolus.
39, 40	8.	Identify the role of the nurse in discharge planning for the patient with a C.V.A. including referral for such services as occupational therapy, vocational rehabilitation, social services, and public health nursing.
36,39,40	9.	Describe the role of the nurse in patient and family education including the promotion of psychosocial adaptation to stroke and its effects.

Read: Phipps, Long, and Wood, pp 796-807

Care of the Patient with Deviations of the Cardiovascular Subsystem, Continued

HYPERTENSION

1,39

1. Terminology:
   Define the following terms:

   hypertension: essential or primary
   secondary
   malignant
   renin/angiotensin mechanism
   antihypertensive agents
   sympathectomy
   catacholamines: epinephrine
   norepinephrine

39

2. Relate the pathophysiology of essential (primary) and secondary hypertension to the pathophysiology, clinical manifestations, and etiologies.

39

3. Explain the major complications associated with chronic, uncontrolled hypertension.

39,40

4. Describe the strategies employed for controlling hypertension:

   pharmacological
   dietary/weight maintainence
   exercise/relaxation
   lifestyle

16,40

5. Using the teaching-learning process, construct short and long range teaching plans for the patient with hypertension.

Read: Phipps, Long and Wood. pp. 1176-1183.

Hahn, Barkin, Oestreich. pp. 605-631.

Enrichment: Moser. Hypertension: How therapy works. AJN 80: 933-946 (May 1980).
Hill, M. and Fink, J. W. In hypertensive emergencies, act quickly but also act cautiously. Nsg 83 (Feb) 33-41, (1983)

Unit VI, Section F

Care of the Patient with Deviations of the Cardiovascular Subsystem - Continued

PERIPHERAL VASCULAR DISEASE

39 1. Define the following terms:

amputation
arteriogram (angiogram)
arteriosclerosis
atherosclerosis
bruit
Burger-Allen exercises
caval ligation
embolectomy
embolus
endarterectomy
Homan's sign
hyperemia (exercise reactive)
intermittent claudication
ligation and stripping (veins)
lymphedema
patch grafting
peripheral vascular disease
phantom limb sensation
Raynaud's disease
thrombus
thromboangiitis obliterans (Buerger's disease)
thrombophlebitis
Trendelenburg test
varicose vein
vasodilator drugs

3,39 2. Describe subjective and objective data collected for identifying patients with peripheral vascular deviations.

39 3. Differentiate between venous and arterial deviations in the following areas: (Deviations include: varicose veins, thrombophlevitis, Raynaud's disease, arterial occlusion, aneurysms, Buerger's disease)

a. pathophysiology
b. assessment parameters
c. strategies for managing
d. prevention/high risk individuals

39,40 4. Compare the strategies utilized for various peripherial vascular diseases including:

a. preventive and maintainence teaching of leg and foot care
b. drug therapies
c. surgical procedures
d. activity and exercise
e. lifestyle behaviors for prevention of PVD

39,40 5. Discuss the overall management of the patient requiring amputation of an extremity:

a. preparation
b. surgical strategies
c. rehabilitation and community resources

39,40 6. Identify adaptations which occur with amputation in the:

a. biological subsystems (cardiovascular, neurological, musculoskeletal and integumentary)
b. psychological subsystem
c. sociological subsystem

Unit VI, Section F (continued)

Read: Phipps, Long and Wood. pp. 1142-1176.

Kozier and Erb. pp. 308-309.

View: VT 849 Antiembolism Stockings (17")

Enrichment: Peterson, F. and Bastarche, et.al., Assessing Peripheral Vascular Disease, AJN: 1549-1556 Nov. 1983. (2 articles)

NS 217

CAMPUS LAB OBJECTIVES

A. Intravenous Therapy

1. List the objectives of intravenous therapy.

2. Compare and contrast the purpose and nature of the following types of IV solutions:

   a) Nutrient solutions
   b) Electrolyte solutions
   c) Alkalinizing and acidifying solutions
   d) Blood volume expanders

3. Demonstrate the procedure for starting an intravenous infusion with a winged steel needle and an intracatheter.

4. Describe nursing strategies required for maintaining an intravenous infusion including the following aspects:

   a) Observation for possible complication
   b) Calculation and regulation of infusion flow rates
   c) Changing IV containers
   d) Changing IV tubing
   e) Discontinuing an IV infusion

Read: Kozier and Erb, pp. 809-821.

View: SL 291 - Catheter Placement Technique, Angio Set
SL 292 - Catheter Placement Technique, Angio Care

NS 217

B. IV Drug Administration

1. Describe the various ways by which an IV drug can be given.

   a. bolus
   b. intermittent intravenous devices (heparin locks or INT)
   c. volume control set (burrette)
   d. minibags

2. Demonstrate the correct procedure for administering an I.V. drug as a bolus through a primary I.V. line.

3. Demonstrate the correct procedure for administering an I.V. drug through an intermittent intravenous device.

4. Describe the procedure for maintaining the patency of an intermittent intravenous device.

5. Demonstrate the correct procedure for administering an I.V. drug through a volume-control set.

6. Demonstrate the correct procedure for administering an I.V. drug through a minibag attached to the primary I.V. set.

7. Describe safety precautions and related nursing strategies for administration of any drug given intravenously whether by bolus, intermittent infusion, or continuous infusion.

Read: Ins and outs of administering IV bolus injections. NURSING 81. 1981, Nov., 124-130. (on reserve)
Peck, N. Perfecting your IV therapy techniques. NURSING 85, 1985, June, 48-51. (on reserve)

NS 217

C. Medication Administration: Skills Review

1. Identify the following IM injection sites: dorsogluteal, ventrogluteal, vastus lateralus, rectus femoris, and deltoid. (Kozier and Erb, pp 969-971)

2. Identify sites for subcutaneous (hypoderinic) injections and describe a plan for site rotation in diabetics to prevent lipodystrophy and lipoatrophy. (Kozier and Erb, pp 963-963)

3. Describe how to choose the correct needle length and gauge for IM and subcu injections.

4. Demonstrate the procedure for Z-track IM's used in administration of iron preparations which can permanently stain tissues (example: Imferon) and of drugs which are highly irritating to subcutaneous tissue. (Govoni and Hayes, pp. 973-974)

5. Demonstrate the procedure for administration of subcutaneous Heparin. (Govoni and Hayes, pp. 973-974)

D. Blood Tranfusions

1. List the reasons for blood transfusions.

2. Identify four main human blood groups and explain why various blood groups are incompatible.

3. Describe the nature and indications for use of the following types of blood and blood products:

   a) Whole blood
   b) Plasma
   c) Packed red cells
   d) Platelets
   e) Albumin
   f) Prothrombin complex
   g) Factor VIII
   h) Fibrinogen preparation

4. Identify potential problems and risks of blood transfusions including the following:

   a) Mislabeling
   b) Transmission of disease
   c) Sensitivities
   d) Citrate toxicity
   e) Iron overload

5. Identify essential guidelines and strategies for assisting with blood transfusions.

6. Describe the following types of transfusion reactions and identify the treatment and nursing strategies related to the care of the patient experiencing these:

   a) Hemolytic reaction
   b) Febrile reaction
   c) Allergic reaction

Read: Kozier and Erb, pp. 821-828.
Phipps, Long and Wood, pp. 1868-1871.

Enrichment: Smith, L. Reactions to blood transfusions. AJN (Sept) 1096-1101. 1984.

View: VT 805 - Transfusion Therapy, RBC
VT 806 - Transfusion Therapy, Platelets, Plasma, Cryoprecipitate

NS 217

E. PAIN

1, 12, 14

1. Define the following terms:

McCaffery's definition of pain
Acute pain
Chronic pain
Somatogenic (organic) pain
Psychogenic (functional) pain
Intractable pain
Referred pain
Phantom pain
Gate control theory
Enkephalins and endorphins
Pain threshold
Pain tolerance
Distraction
Relaxation
Counterirritant
Contralateral stimulation
Analgesic
Narcotic analgesic
Nonnarcotic analgesic
Narotic angonist-antagonist
Placebo
Transcutaneous electric stimulation

1, 12, 14

2. Differentiate:

acute from chronic pain
somatic (organic pain) from psychogenic (functional pain)

12,14		3. Describe the transmission of pain signals over Type A fibers and Type C fibers to the brain.
12,14		4. Describe the gate control theory of pain and the relationship of endorphins and enkephalins to the transmission of pain impulses or perception of pain.
12,14		5. Describe the physiologic response to pain which results in part by activation of the sympathetic nervous system.
10,11		6. Discuss the factors to be included in the assessment of pain.
14		7. Describe pain relief strategies including distention, relaxation, use of cold packs, analgesic ointments, counterirritants, cutaneous and contralateral stimulation.
		8. Compare and contrast narcotic and nonnarcotic analgesics.
37		9. Describe how placebos relieve pain and list four factors suggested by McCaffery to promote pain relief with placebos.
11,39		10. Outline nursing responsibilities related to continuous morphine infusion including treatment of respiratory depression with a narcotic antagonist.
39		11. Describe the use of transcutaneous electrical nerve stimulation in the relief of acute and/or chronic pain.
39		12. Identify 12 guidelines essential to the knowledge of the nurse in providing pain relief.

Read: Kozier and Erb pp. 631-648
McCaffery, M. Understanding your patient's pain. Nursing 80, 10 (9), 26-31.(On reserve.)
McCaffery, M. Patients shouldn't have to suffer: (How to relieve pain with injectable narcotics). Nursing 80, 10 (10), 34-39.(On reserve.)
McCaffery, M. How to relieve your patient's pain fast and effectively with oral analgesics. Nursing 80, 10 (11), 58-63.(On reserve.)
McCaffery, M. Relieving pain with noninvasive techniques. Nursing 80, 10(12), 55-57.
Hahn, Barkin, and Oestreich, pp. 142-162. (On reserve.)

Enrichment: Meyer, T. Tens: Relieving pain through electricity. Nursing 82, September; 57-59. (On reserve.)

F. Surgical Asepsis and Sterile Dressing Change: Skills Review

1. Review the basic principles of surgical asepsis (sterile technique). (Kozier and Erb, pp. 467-468.)

2. Review the following procedures related to surgical asepsis:

   a) opening sterile wrapped packages
   b) handling of sterile forceps
   c) pouring sterile solutions
   d) applying sterile drapes
   e) donning sterile gloves (demonstrate)

   (Kozier and Erb, pp. 467-479.)

3. Review the procedure for sterile dressing change utilizing principles of surgical asepsis. (Kozier and Erb, pp. 1033-1036.) Describe observations the nurse needs to note and record when assessing wounds. (Kozier and Erb, p. 1031.)

4. Review the procedure for shortening penrose drains and cleaning the drain site. (Kozier and Erb, pp. 1036-1037.)

G. Urinary Procedures: Skills Review

1. Review the following procedures:

   a. Insertion of a retention catheter (foley)

   b. Nursing care of the patient with a foley catheter.

   c. Obtaining a sterile specimen from a retention catheter.

   d. Catheter removal.

   e. Measurement of hourly urine output and emptying of the foley bag.

   (Kozier and Erb, pp. 721-731.)

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H. TUBERCULIN SKIN TESTING (PPD SKIN TEST)

1. State the rationale for tuberculin skin testing.

2. Define the term "reactor".

3. Demonstrate the technique for performing a tuberculin skin test using 0.1 ml of purified protein derivative (PPD).

4. State the time intervals at which a PPD skin test is read.

5. Describe how to accurately interpret the results of a PPD skin test.

Read: Smith and Duell, p. 265
Phippe, Long, and Wood, p. 1303

NS 217

CLINICAL OBJECTIVES

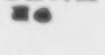
Following completion of the corresponding units in classroom theory, the student will meet the following clinical objectives when assigned to a patient with related health deviations:

CARE OF THE PATIENT WITH DEVLATIONS OF ACID-BASE BALANCE

3, 39		1. Assess assigned patients for signs and symptoms of deviations of acid-base balance.
10,39		2. Establish nursing diagnoses related to the state of acid-base balance of assigned patients.
13,39		3. Plan, implement, and evaluate appropriate nursing strategies related to the promotion, maintenance, or restoration of acid-base balance.

NS 217

CARE OF THE PATIENT WITH DEVIATIONS OF THE INTEGUMENT RESULTING FROM BURNS

3, 37, 38		1. Assess assigned patients for biological and psychological subsystem changes related to the burn injury.
10,37, 38		2. Establish nursing diagnoses related to biologic and psychologic adaptive states of the burn patient.
13, NS 127		3. Plan, implement, and evaluate strategies for the promotion, restoration, and maintenance of fluid and electrolyte balance in the burned patient.
13, 38		4. Plan, implement, and evaluate nursing strategies to prevent wound infection in the burn patient.
11, 38		5. Perform nursing skills related to the treatment of burned areas, including dressing changes and application of topical medications.
5,11,13,38		6. Plan, implement, and evaluate nursing strategies to promote, restore, and maintain optimal nutrition, mobility, and bowel elimination in the burn patient.
13, 38		7. Plan, implement, and evaluate strategies to promote psychological adaptation in the burn patient.
16, 36, 38		9. Implement and evaluate the teaching-learning process in relation to the learning needs of the burn patient.

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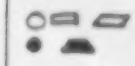
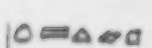
CARE OF THE PATIENT WITH DEVIATIONS OF THE GI SUBSYSTEM

3, 39, 40		1. Assess assigned patients for signs and symptoms of upper and lower gastrointestinal tract deviation.
10,39		2. Establish nursing diagnoses related to the patient with deviations of the upper or lower G.I. tract.
5,11,40		3. Perform psychomotor skills related to the treatment of GI tract deviations including insertion, administration, and/or maintenance of: NG tubes; intermittent suction; gastrostomy, esophagostomy and NG tube feedings; promotion of nutrition via IV and TPN infusions; and provision of colostomy care and colostomy irrigation.
39,40		4. Plan, implement, and evaluate appropriate nursing strategies related to the patient with GI tract deviations including those involving surgery of the GI tract.
6,36,39,40		5. Implement and evaluate the teaching-learning process in relation to patients with deviations of the GI subsystem.

CARE OF THE PATIENT WITH DEVIATIONS OF THE LIVER AND RELATED STRUCTURES

3, 40		1. Assess assigned patients for signs and symptoms of liver, biliary, and non-endocrine pancreatic deviations.
10, 40		2. Establish nursing diagnoses related to the patient with liver, biliary, and non-endocrine pancreatic deviations.
13, 39, 40		3. Plan, implement, and evaluate appropriate nursing strategies (including pre and post-operative) related to the patient with liver, biliary, and non-endocrine pancreatic deviations.
16, 40		5. Implement and evaluate the teaching-learning process in relation to patients with deviations of the liver and its related structure.

CARE OF THE PATIENT WITH DEVIATIONS OF THE ENDOCRINE SUBSYSTEM

40		1. Assess a patient with health deviations in one or more endocrine subsystems.
40		2. Construct a plan of care for a patient receiving hormonal replacement necessitated by an endocrinopathy.
3,7,12, 39, 40		3. Assess a patient with diabetes mellitus incorporating all subsystems.
3,4, 40		4. Utilize the nursing process in assessment and promotion of restoration necessary for the patient with diabetes mellitus.
5, 39,40		5. Administer insulin to a patient with diabetes mellitus evaluating its therapeutic and/or adverse effects.
16, 36, 39,40		6. Using the teaching-learning process, implement one phase of a teaching plan for a patient with diabetes mellitus.
11,16, 39, 40		7. Perform strategies in the promotion, maintenance, and restoration modes for a patient with an endocrine deviation.

Care of the Patient with Deviations of the Cardiovascular Subsystem

3, 40

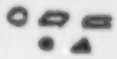
1. Utilize subjective and objective data in making an assessment of a patient with coronary artery disease including:

   a) physical assessment
   b) cardiac diagnostic data
   c) cardiac monitoring

11, 40

2. Apply cardiac monitoring electrodes correctly and utilize monitoring equipment with guidance for a patient with a potential or actual cardiac dysrhythmia.

3. Interpret a normal electrocardiogram rhythm strip (Lead II) and relate the components to the normal cardiac cycle when assigned to a patient with cardiovascular deviations.

39,40 

4. Implement appropriate strategies for the patient who has potential or actual inadequate cardiac output related to:

   a) activity/exercise
   b) drug management
   c) diet/weight management
   d) danger signs

3,12,40

5. Assess the clinical manifestations resultant from peripheral circulatory impairment.

11,40

6. Administer medications for prevention and/or management of peripheral circulatory deficits.

11,40

7. Implement strategies in supportive and restorative modes for a patient with an amputation during:

   a) preoperative phase
   b) postoperative phase
   c) adaptation to a prosthesis

NS 217

Care of the Patient with Deviations of the Cardiovascular Subsystem - Continued

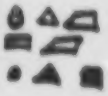
11,40

8. Refer patients and/or families to appropriate community resources

11,40

9. For a patient who has hypertension, provide nursing strategies in one or more of the following areas:

a) lifestyle/relaxation techniques
b) drug therapy
c) diet modification/weight management

11,40 

10. Implement appropriate strategies for a patient diagnosed with cerebrovascular disease in a supportive/restorative mode.

CHATTANOOGA STATE TECHNICAL COMMUNITY COLLEGE
Chattanooga, Tennessee
Nursing Division

NS 217

REQUIREMENTS FOR ASSIGNMENTS FOR NS 217L

I. PREPARATION FOR CLINICAL ASSIGNMENTS

A. Bring to PRECONFERENCE:

1. assessment guide
   a. Complete the two sections on pathophysiology and textbook or standardized care plan.
   b. Diet summary—if regular diet, what foods should be emphasized?
   c. Drug cards.

B. Due on Monday following clinical:

1. All of the above (I)
2. Patient assessment:
   Include with psychological assessment, the patient's developmental tasks or stages (i.e., age 25, young adult; USE RESOURCES).
   Formulate a nursing diagnosis related to the developmental stage.

II. Care Plans

A. Two care plans are due; dates may be designated by your instructor or they will be due one week after assignment.
   Points deducted for being late:
   First day - 5 pts
   Each subsequent day - 1 pt

B. Each care plan must have a section on the teaching-learning process and include comprehensive information specific to the patient's needs (utilize C.P. format as with other nursing diagnoses).

C. Deviations in any subsystem:
   ALL nursing diagnoses are written and prioritized. The first top FOUR nursing diagnoses need to be developed.
   RATIONALE for nursing orders need to be concise, relevant and documented with author and page number. EACH nursing order needs rationale but if previously written with another order, may refer to it.

D. Grading of care plan:
   Sample care plan will be provided with information related to grading.

CHATTANOOGA STATE TECHNICAL COMMUNITY COLLEGE
Chattanooga, Tennessee
Nursing Department

PATIENT ASSESSMENT GUIDE

I. Integumentary

1. Skin: condition (hot, cold, dry, moist, diaphoretic [sweaty] flushed, itchy, scaly, discolored, jaundiced, smooth, cracked) bruises, incisions, scars, abrasions, ulcerations, discharge, lesions (pustules, vesicles, etc.) turgor (elastic, nonelastic)

2. Perspiration: amt, location

3. Color: skin, nailbeds, mucous membranes, lips (pale, dusky, cyanotic, pink, flushed)

4. Temperature: route, range, (c/o chills, hot flashes)

5. Hair: texture, distribution, amt

6. Nails: color, texture

7. Conjunctiva and sclera: color (jaundiced?)

8. Meds, dx tests, special procedures/treatments:

II. Neurological:

1. Level of Consciousness (awareness of self and environment; orientation to person, place, and time):

   a. alert = awake and aware of environment without stimulation; oriented to person, place, and time; responds briskly and appropriately to minimal visual, auditory, and tactile stimuli
   b. lethargic = sleeps much of time but easily aroused and when aroused is oriented. Speech may be slow or hesitant
   c. obtunded = difficult to arouse; arouses only to painful stimuli or must be shaken awake ; responds verbally when aroused but response confined to few words which do not make sense; returns quickly to sleeping state
   d. stuporous = aroused only by painful stimuli; no response to painful stimuli; never fully wakened
   e. semi-comatose = reflex movement only elicited by painful stimuli; gag reflex and corneal reflex present; decorticate or decerebrate posturing may be present
   f. comatose = no response to maximal painful stimuli; reflexes absent; absence of muscle tone in extremities.

II. Neurological - continued

2. Mood - Emotional State - Behavior: appropriate or inappropriate; confused, hyperactive, belligerent, combative, cooperative

3. Pupils: size, equality, shape, reaction to light (ex: PEARL)

4. Sensory Status: response to sensory stimuli - verbal, touch, shake, pain, temperature, proprioception

5. Motor Status: muscle size and symmetry; strength (upper and lower equality - weakness, paresis); muscle tone (hypertonic, hypotonic, spasticity, rigidity, flacidity); coordination and gait (steady, ataxic, staggering, slow, shuffling); involuntary movements (tremors, spasms, myoclonus, chorea, athetosis); posture (decerebrate, decorticate), Deep tendon reflexes (DTR's)---normal, diminished, increased, absent

6. Speech Patterns: clear, coherent, slurred, incoherent, weak, strong

7. Cranial Nerves: abnormal test results

8. Meds, dx tests, special procedures/treatments:

III. Respiratory

1. Chest: shape, symmetry of expansion, use of accessory muscles, retractions of intercostals

2. Respirations: rate, rhythm (reg, irreg); depth (shallow, deep) type (abdominal, thoracic) quality and nature (labored, unlabored, stertorous, wheezing, gasping, orthopneic, quiet); through nose or mouth, c/o pain or dyspnea, position of comfort for breathing

3. Cough: frequency, quality (hacking, harsh, rasping, barking, etc.) productive or non-productive

4. Expectoration: Sputum (amt, color, odor---clear, frothy, tenacious, purulent, green, rusty, bloody, etc.)

5. Breath odor: foul, sweet, sour

6. Breath sounds on Ascultation: presence, loudness, and symmetry of breath sounds throughout lung fields (↓ed, absent, present, etc.); adventitious sounds (rales, rhonchi, wheezes, friction rub)

7. Oxygen therapy: reason ordered, mode (nasal cannula, face mask, face tent, Venturi, etc.); flow rate (liters/min or %)

IV. Cardiovascular

1. Pulse: rate, rhythm (reg/irreg); volume (weak, thready, bounding); elasticity of arterial wall, pt's norm + range, locations palpated: brachial, ulnar, femoral, popliteal, posterior tibial, dorsalis pedis (note pulses as nl, diminished or absent)
2. B.P.: pt's norm, range
3. Presence of cyanosis: nailbeds, lips, buccal mucosa, sublingual area
4. Fingertips: clubbed?
5. Edema: type, location (pitting, generalized)
6. Neck Veins: nl or distended
7. Varicosities: vein involved, appearance
8. Meds, dx tests, special procedures/treatments:

V. Gastrointestinal

1. Wt, ht: (compare to norm)
2. Food Intake: nature, amt or % of diet eaten, diet prescription or restriction
3. Appetite: hungry, anorexic?
4. Nausea and Vomiting: nature, freq. and amt. of emesis (green, brown, watery, frothy, bloody, coffee ground, fecal, projectile, etc)
5. Difficulty Chewing or Swallowing:
6. Bowel Sounds: check all 4 quadrants---present, absent, normal, hypoactive, hyperactive
7. Feces: color, amt, consistency, elimination pattern
8. Abdomen: soft, flat, rigid, distended, c/o pain or discomfort
9. Meds, dx tests, special procedures/treatments:

VI. Urinary

1. Fluid intake: nature, quantity, any restrictions, I+O

2. Urine: color (pale yellow, light amber, amber, dark amber, straw colored, brown, red, blue, etc.); clarity (clear, cloudy, sedimentation, mucous); amt (sm, mod, large, q.s., scant, none---measure hourly if scant or if I+O critical); odor (nl, foul, etc.)

3. C/O: burning, pain, difficulty urinating, hesitancy or frequency. Incontinence, distention & inability to void, or retention with overflow, etc.

4. Presence of foley: size, no. days since insertion (or date of insertion), urinary meatus appearance (discharge, edema, redness, pain, erosion)

5. Meds, dx tests, special procedures/treatments

VII. Reproductive

1. External genitalia: nl, abnl (describe abnormalities)

2. Discharge: vag/penile (amt, color, odor)

3. Other: No. of pregnancies, children; family planning (method used), menstrual pattern, menopause (age, sx, etc), breasts (self-exam routine, lumps, lesions, discharge); freq. of pap smears; sexual desire and function, attitudes toward sexuality; medicines taken which affect reprod. system

VIII. Musculoskeletal

1. Pain or discomfort: (describe)

2. Problems with ADL secondary to musculoskeletal deviation: (describe assistance needed and use of special devices)

3. Posture, joints, and extremities: deformities (swan-neck, ulnar deviation, valgus or varus deformity, scoliosis, kyphosis, atrophy or hypertrophy of muscles); muscle strength, joint ROM, dexterity, coordination (flaccidity, spasticity, paralysis, presence of contractures, crepitus, etc)

4. Meds, dx tests, special procedures/treatments:

IX. Endocrine

Abnl function of endocrine glands and effects, growth patterns, heat or cold intolerance, excessive hunger, thirst, or urination, meds, dx tests, special treatments or procedures.

X. Psychological

1. Manner of relating to others (congenial, talks readily, answers only "yes-no", eye contact, etc)

2. Views about hospitalization and health deviation: If previously hospitalized, how was it viewed by pt and/or significant others? Expectations and feelings related to current hospitalization (may ask "What brought you to the hospital?" or "What has the doctor explained about your treatment?")

3. Special concerns or fears related to health deviation, surgery, and its effects

4. Self-concept: (body image before and in relation to current health problems)

5. Roles interrupted by hospital:

6. Availability, need for, and effectiveness of internal-external support systems

7. Coping patterns used in stressful situations: (ask what pt does to make stressful situations less stressful or what makes pt "feel better" when under stress). Sleep, food, exercise, prayer, meditation, special relaxation techniques, drugs, alcohol, tobacco, etc. often used as stress coping devices

XI. Sociological

1. Family constellation: ages and number of individuals living in home; relationship to pt; alterations in family's life-style because of ill member

2. Support system: family, church group, co-workers, co-students, etc.

3. Socio-economic strata: (lower, middle, upper)

4. Occupation: work place, school, former occupation if retired, diversional activities; insurance (hospitalization); changes in work pattern resulting from illness

5. Social habits: use of alcohol, tobacco, drugs, etc. (frequency, amt, etc.)

XII. Cultural

1. Ethnic group: (Hispanic, native American, etc.)

2. Community type and region: (South, New England, etc; rural or urban)

3. Factors that may influence reaction to hospital, therapy, illness: (Cultural food preferences, beliefs about causation of illness, beliefs in folk healing remedies, etc.)

XIII. Intellectual

1. Ability to understand and communicate: (language barriers; LOC; orientation to person, place and time)

2. Educational level: (last grade completed)

3. Ability to read and write; vocabulary; attention span and memory; ability to comprehend and follow directions

4. Special considerations related to health teaching: vision (need for glasses), hearing acuity (need for hearing aid), dexterity and fine motor control, etc.

XIV. Ethical/Spiritual

1. Practices or beliefs significant to pt and effects of these on health status or care (prescriptions against immunizations or blood transfusions, dietary laws, beliefs about disease and death)

2. Religious affiliation

3. Desire for chaplain visit

CHATTANOOGA STATE TECHNICAL COMMUNITY COLLEGE
Chattanooga, Tennessee
Nursing Department

The following nursing diagnoses were approved at the Fifth National Conference on Classification of Nursing Diagnoses.

They have been organized here by subsystems to reflect the philosophy and conceptual framework of the nursing program at Chattanooga State Technical Community College. Page numbers given will refer you to further diagnostic information on etiologies and defining characteristics in the Pocket Guide to Nursing Diagnoses.

Integumentary Subsystem:	Skin Integrity, Impairment of:	Actual	53
" "	" " "	Potential	54
Respiratory Substem:	Airway Clearance, Ineffective		8
	Breathing Pattern, Ineffective		13
	Gas Exchange, Impaired		26
	Activity Intolerance*		8
	Activity Intolerance, Potential* (*Musculoskeletal and Cardiovascular subsystems also)		8
	Communication Impaired: Verbal (*Cardiovascular, Neurological, Psychological and Cultural Subsystems also)		
	Tissue Perfusion, Alteration in: Respiratory		59
Cardiovascular Subsystem:	Cardiac Output, Alteration in: Decreased		13
	Tissue Perfusion, Alteration in: Cardiovascular		59
	Activity Intolerance (*Musculoskeletal Subsystem also)		8
	Activity Intolerance, Potential *		8
	Communication, Impaired: Verbal (*Neurological, Respiratory, Psychological and Cultural Subsystems also.)		15
Neurological Subsystem:	Self-Care Deficit: Feeding, Bathing/Hygiene, Dressing/Grooming, Toileting (*Musculoskeletal, and Psychological Subsystems also)		45
	Sensory-Perceptual Alteration: Visual, Auditory, Kinesthetic, Gustatory, Tactile, Olfactory (*Sociological subsystem also)		51
	Violence, Potential for: Self-Directed or Directed at Others *See Psychological Subsystem also		61
	Communication, Impaired: Verbal *See Psychological, Cultural subsystem also.		
	Self-Care Deficit: Feeding, Bathing/Hygiene, Dressing/Grooming, Toileting (*Intellectual, Musculoskeletal and Psychological subsystems also)		43

Musculo/Skeletal Subsystem:	Activity Intolerance (*Cardiovascular and Respiratory subsystems also)	8
	Activity Intolerance, Potential	8
	Mobility, Impaired (*neurological, intellectual and psychological subsystems also)	36
	Self-Care Deficit: Feeding, Bathing/Hygiene, Dressing/Grooming, Toileting (*Intellectual, Neuromuscular, and psychological subsystems also.)	45
Gastrointestinal Subsystem:	Bowel Elimination, Alteration in: Constipation	10
	" " " ": Diarrhea	11
	" " " ": Incontinence	12
	Nutrition, Alteration in: Less than Body Requirements	38
	Nutrition, Alteration in: More than Body Requirements	39
	Nutrition, Alteration in: Potential for more than Body Requirements	39
	Tissue Perfusion, Alteration in: Gastro-intestinal	59
Urinary Subsystem:	Urinary Elimination, Alteration in Patterns	60
	Tissue Perfusion, Alteration in: Renal	59
Reproductive Subsystem:	Sexual Dysfunction	52
Endocrine Subsystem:	Will depend on specific deviation and its effects.	
Psychological Subsystem:	Anxiety (*Sociological, Intellectual, Ethical, and Cultural Subsystems also)	9
	Fear (*Sociological, Intellectual, Ethical/ Spiritual and Cultural Subsystems also)	22
	Coping, Family: Potential for Growth	16
	Coping, Ineffective Family: Compromised	17
	Coping, Ineffective Family: Disabling	18
	Coping, Ineffective Individual	19
	Grieving, Anticipatory	27
	Grieving, Dysfunctional	27
	Powerlessness	43
	Parenting, Alteration in: Actual or Potential	41
	Self-Concept, Disturbance in:	47
	a. Body Image, Disturbance in	
	b. Self-Esteem, " "	
	c. Role Performance, " "	
	d. Personal Identity," "	
	(*Intellectual, Sociological, Cultural and Ethical/Spiritual subsystems also)	
	Violence, Potential for: Self-Directed or Directed at Others (*Neurological Subsystems also)	61
	Communication, Impaired: Verbal (*Neurological, cultural and respiratory subsystems also)	15
	Sexual Dysfunction (Intellectual, Ethical/ Spiritual,Sociological,and Reproductive subsystems also)	52

Sociological Subsystem:	Social Isolation	56
	Family Process, Alteration in (*Psychological subsystem also).	21
	Sensory-Perceptual Alteration: Visual, Auditory, Kinesthetic, Gustatory, Tactile, Olfactory (*See Neurological subsystem also)	51
	Anxiety (*Intellectual, Psychological, Cultural, and Ethical subsystems also)	9
	Fear (*Intellectual, Psychological, Cultural and Ethical/Spiritual subsystems also)	
	Self-Concept, Disturbance in: Body Image, Self-esteem, Role Performance, Personal Identity (*Psychological, Intellectual, Cultural, and Ethical/Spiritual Subsystems also)	
	Sexual Dysfunction (*Reproductive, Ethical/Spiritual, Psychological, and Cultural Subsystems also)	
Cultural Subsystem:	Anxiety *See Sociological, Intellectual and Psychological, and Ethical Subsystems also	9
	Communication, Impaired: Verbal (*See Psychological, Neurological, Cultural and Cardiovascular Subsystems also.)	13
	Fear (*Psychological, Sociological, Ethical/Spiritual, and Intellectual Subsystems also)	
	Self-Concept, Disturbance in: Body Image, Self-Esteem, Role Performance, Personal Identity	47
Intellectual Subsystem:	Knowledge Deficit (Specify defecit)	36
	Thought Processes, Alteration in	58
	Anxiety (*Psychological, Sociological, Ethical/Spiritual Subsystems also)	
	Fear (*Psychological, Sociological, Cultural and Ethical/Spiritual Subsystems also)	
	Self-Care Deficit: Feeding, Bathing/Hygiene, Dressing/Grooming, Toileting (*Neuromuscular, Psychological and Musculoskeletal subsystems also)	45
	Self-Concept, Disturbance in: (Types: Body Image, Self-esteem, Role Performance, Personal Identity)	
	Sexual Dysfunction (*Reproductive, Ethical/Spiritual, Psychological, and Sociological subsystems also)	

Ethical/Spiritual:	Anxiety(*Psychological, Sociological, Intellectual, Ethical and Cultural Subsystems also)	9
	Fear (*Psychological, Sociological, Cultural, and Intellectual subsystems also)	
	Self-Concept, Disturbance in: Body Image, Self-esteem, Role Performance, Personal Identity (*Psychological, Cultural, Intellectual, and Sociological subsystems also)	47
	Sexual Dysfunction (*Psychological, Reproductive, Intellectual, and Sociological subsystems also)	
Other Accepted Diagnosis:	Comfort, Alteration in: Pain	14
	Fluid Volume, Alteration in: Excess	24
	Fluid Volume Deficit, Actual I	24
	Fluid Volume Deficit, Actual II	25
	Fluid Volume Deficit, Potential	26
	Communication, Impaired: Verbal	15
	Diversional Activity, Deficit	21
	Health Maintenance, Alteration in	28
	Home Maintenance Management, Impaired	29
	Injury: Potential for	30
	Poisoning, Potential for	32
	Suffocation, Potential for	33
	Trauma, Potential for	33
	Noncompliance (Specify)	37
	Oral Mucous Membrane, Alteration in	40
	Parenting, Alteration in: Actual or Potential	41
	Rape Truma Syndrome: Rape Trauma, Compound Reaction, Silent Reaction	44
	Sleep Pattern Disturbance	55

Kim, M., McFarland, G., and McLane, A. Pocket guide to nursing diagnoses. St. Louis: C. V. Mosby Co., 1984.

CHATTANOOGA STATE TECHNICAL COMMUNITY COLLEGE
Chattanooga, Tennessee
Nursing Division

NAME: _____ UNIT: _____

Attached is the evaluation form for the clinical behaviors. You will be asked to complete this evaluation form at the end of the quarter as a means of self-evaluation. To help you remember your patient case load when you later complete your evaluation, fill out the following information at the end of each clinical day.

DATE	PATIENT INITIALS	MEDICAL DIAGNOSIS	PRIORITY NURSING DIAGNOSIS

CHATTANOOGA STATE TECHNICAL COMMUNITY COLLEGE
Chattanooga, Tennessee
Nursing Department

CLINICAL BEHAVIORS FOR NS 217

Legend: N/A Not Applicable or Not Observed
1 Consistently Unsafe
2 Consistently Safe
3 Consistently Safe and Able to Adapt Delivery of Nursing Care

* Critical Behavior

I. Role as a Provider of Direct Patient Care

	NA	1	2	3
A. Assessment				
*1. Collect data according to established protocol utilizing available resources.				
*2. Identify and document changes in the patient's state of adaptation.				
a. Assess and record the patient's state of adaptation related to fluid, electrolyte, and acid base balance.				
b. Assess and record the state of adaptation of patients with integumentary subsystem health deviations related to burns.				
c. Assess and record the state of adaptation of patients with gastrointestinal subsystem health deviations.				
d. Assess and record the state of adaptation of patients with endocrine subsystem health deviations.				
e. Assess and record the state of adaptation of patients with deviations of the cardiovascular subsystem.				

B. Analysis

N/A	1	2	3

*1. Establish a nursing diagnosis based on the patient's state of adaptation.

C. Planning

*1. Establish priorities of care based on the nursing diagnosis.

*2. Set goals and develop objectives in conjunction with the patient or a significant other.

*3. Develop individualized nursing care plans based upon the nursing diagnosis and identify strategies for implementation according to established protocols.

D. Implementation

*1. Implement psychomotor, cognitive, and affective nursing strategies to promote, maintain, or restore the patient's optimum steady state of adaptation.

a. Implement appropriate strategies for patients with deviations of fluid, electrolyte, or acid-base balance.

b. Implement appropriate strategies for patients with deviations of the integumentary system related to burns.

c. Implement appropriate strategies for patients with health deviations of the gastrointestinal subsystem.

d. Implement appropriate strategies for patients with health deviations of the endocrine subsystem.

e. Implement appropriate strategies for patients with health deviations of the cardiovascular subsystem.

	N/A	1	2	3
2. Implement appropriate strategies related to maintenance of fluid and electrolyte balance.				
a. Initiate IV therapy.				
*b. Manage IV/hemo-therapies.				

E. Evaluation

*1. Compare the patient's state of adaptation with previously defined objectives and goals.				
2. Identify alternate strategies to promote, maintain or restore the patient's optimum steady state of adaptation, modify the plan of care accordingly and document changes.				

NS 217 Clinical Behaviors

	N/A	1	2	3
II. Role as a Communicator				
*1. Assess verbal and non-verbal communication of patients or significant others.				
*2. Utilize communication skills effectively as a method of data collection, implementation of strategies, and evaluation of care.				
*3. Establish and maintain effective communication with health team members and evaluate the effectiveness of this communication.				
*a. Provide accurate and appropriate verbal reports on the state of adaptation of patients to appropriate team members.				
*b. Chart accurately nursing assessments, diagnoses, strategies, and evaluation of nursing care in patient records.				
4. Use appropriate referral sources to promote, maintain or restore the patient's optimum steady state of adaptation.				
III. Role as a Patient Teacher				
*1. Identify situations in which individual patients need information to promote, maintain or restore the optimum steady state of adaptation.				
*2. Assess the patient's level of development, knowledge, and readiness to learn.				
*3. Develop or adapt short-range teaching plans for implementation with individual patients.				
*4. Implement teaching plans with individual patients.				
*5. Evaluate the patient's learning and modify teaching plans accordingly.				

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	N/A	1	2	3
IV. Role as a Planner and Coordinator of Patient Care				
*1. Assess and establish priorities of nursing care.				
*2. Implement nursing strategies with individual patients reflecting prioritization of patient objectives and strategies to accomplish these.				
V. Role as a Member within the Profession of Nursing				
*1. Demonstrate accountability for technical nursing practice within the profession's ethical and legal framework.				
*2. Assess own performance using established criteria.				
*4. Function dependently consulting a more experienced registered nurse when caring for individual patients who are not within the scope of practice.				
*5. Assume responsibility for continued learning as a means of growth, development and maintenance of competencies within the scope of practice.				

Safe = A score of 2 on all critical behaviors and an average of 2 for all behaviors.

Unsafe = A score of 1 on any critical behavior or an average of less than 2 for all behaviors.

Comments:

_____ _____

Student Signature Instructor Signature

Date:_____ Date:_____

7-8-85

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